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BALTIMORE, NOVEMBER 7, 1907.

THE SOUTH AS THE SAVING POWER OF THE COUNTRY.

The South holds a call upon the world's gold to the extent of \$450,000,000 to \$500,000,000 for the cotton which it will this year furnish to Europe. Every dollar of gold mined on earth during the present year would not be sufficient to pay the bill, and this call which the South has upon Europe is one which will prove not only a great blessing to the South, but a great blessing to the entire country. This money, whether paid in actual gold or in other ways, will so strengthen the financial situation, not only of the South, but of New York and the country at large, as to make the South the saving power in American financial interests. No other crop on earth is of such far-reaching importance to any other great country as cotton is to the United States. Had it not been for the late season, which delayed cotton-picking from three to four weeks, the crop would have gone forward at the same time as heretofore and would have largely helped to stem the financial current, and would doubtless have materially aided in preventing the panicky conditions in New York. When Nature, through a late spring, delayed the cotton crop of the South she lessened the power of the South to that extent to save the United

States from the drastic liquidation of the last 30 days. But, though late in maturing, cotton has for the last few weeks been moving to market as rapidly as the banks could provide the necessary currency for its handling. Upon a severe pinch Europe may sometimes lessen its imports of other things, but cotton it must have, and cotton it will have, regardless of all other conditions. It will this year take from the South about 8,000,000 bales, worth as it leaves our ports somewhere from \$450,000,000 to \$500,000,000, dependent upon the fluctuating prices, due more to lack of currency than to the statistical position of the cotton trade. But for this temporary currency famine it is quite certain that Europe would have paid us largely over \$500,000,000.

The whole country, every business man in it, whether he be manufacturer, merchant or banker, farmer or mechanic, and whether his home be in the far North or far West, will be indebted to the South for producing the crop which at this critical stage is already saving the situation, and which will soon turn such a tide of gold or its equivalent to our shores as to stay the hysterics and stop the fear which has been paralyzing the free and easy movement of the banking facilities of the country. While enriching itself the South will be enriching the whole nation.

THE STEEL CORPORATIONS' EN- TRANCE INTO THE SOUTH.

Two years ago, when the control of the Tennessee Coal, Iron & Railroad Co. passed from the ownership of the people who had dominated it for many years to a pool composed of John W. Gates and his associates, a great step forward was made for the development of the iron and steel interests of Alabama. The new owners immediately commenced to carry out on a large scale plans for an increased output of iron and the doubling of their steel rail capacity, involving an outlay of a good many millions of dollars.

Important to the South as was this transfer of ownership, it is of still greater importance that another step forward has been made and that the Tennessee has now passed into the control of the United States Steel Corporation. The MANUFACTURERS' RECORD has long claimed that it would be impossible for the Steel Corporation to ignore the marvelous strategic importance of the Alabama iron district. Now that the Steel Corporation has secured control of the Tennessee Company the world will be assured of the development of the iron and steel interests of Alabama on a scale commensurate with the natural advan-

tages of that State. Backed by the vast resources in money, brains and energy of the Steel Corporation, the Alabama district, with its practically limitless resources of coal and iron, ought to leap forward into a far more commanding position than ever before in the world's metallurgical affairs. For good business reasons as well as public policy will compel the Steel Corporation to make the most of the advantages of Alabama for iron and steel production. The recent report of President Topping of the Tennessee Company placed the known iron-ore resources of that company at 700,000,000 tons and the coal at 2,000,000,000 tons. This is about as much iron ore and several times as much coal as the Steel Corporation owned when it was organized. Here is a wealth of resource in raw material needing but the magic wand of ample capital to enable Alabama to take its rightful place as one of the foremost centers of the world's iron and steel production. With the Steel Corporation owning these vast properties in Alabama it will be reasonable to expect that it will carry forward on a much larger scale than the former owners could possibly do the fullest utilization of this wealth of raw material, and the development of the properties of the Tennessee Company, through the entrance into the Alabama district or the Steel Corporation, will unquestionably prove of very great advantage to all other iron and coal properties in that State.

Out of the trials and tribulations which have harassed the whole country, coming in part from the conditions prevailing in Wall Street, the South is to be congratulated that what it was never able to do in fair weather it has accomplished in stormy weather, by drawing into the development of its iron and steel the greatest aggregation of capital and brains in the world in that trade.

Great as is the value of this move on the part of the Steel Corporation to the South, it is of even greater importance to the Steel Corporation itself. It gives to that company an ownership of coal and iron-ore properties, in addition to what it has already had, so vast as to tremendously strengthen its own strategic situation and enhance the value of all its securities. At a cost so trifling as to be a mere bagatelle as compared with intrinsic value, the Steel Corporation through this purchase nearly doubles its ownership of ore properties and more than doubles its ownership of coal at a cost of not more than about 2 or 3 per cent. of its capitalization. Economic laws would in time have compelled the Steel Corporation to secure large coal and iron-ore interests in Alabama in order to hold a strong position in the predestined center of iron and steel making, but conditions in Wall Street have brought about this situation much sooner than it would otherwise have been accomplished and at a cost to the Steel Corporation of but a trifle as compared with what it would doubtless have had

to pay within a few years. The value of every other good iron and coal property, not only in Alabama, but in the central South, is tremendously enhanced by this change.

CONFERENCES THAT COUNT.

The State of Virginia is to be congratulated that Gov. Claude A. Swanson did not participate in the gubernatorial conference at Atlanta last week, as it was reported he might do.

If every Governor in the South should hold a conference with himself exclusively and determine, where the necessity is pressing, as is the case in three or four States, to call an extra session of the Legislature of his State for the repeal of all laws hampering the legitimate operations of corporations and, consequently, choking the channels for the inflowing of capital so much needed for extension of the operations, the South would lead in a restoration of the country's confidence in itself and would remove the obstacles to proper development of the Southern States.

Lack of confidence, unjustified by the natural situation, is due as much to the fear of what future executive and legislative action may induce as by knowledge of what already has been so disastrously accomplished.

It requires courage of the highest order for a man in public position to get into a frame of mind that will identify his mistake and then to acknowledge that he has made the mistake and to seek to rectify it. Such courage is hardly mentionable in connection with co-operative efforts to confirm one in one's mistake. What Governor in the South is to lead in confessing that he, with executives in other parts of the country not confined to State administrations, has made woeful mistakes in dealing with creators of confidence and developers of prosperity?

Several million people are ready to rise up and call such a Governor blessed.

AT ITS OLD TRICKS.

After a trial for Nashville, with some rather embarrassing developments last year, the Conference for Education in the South put up the bluff of finding it preferable to hold that meeting in "a retired place," a rural retreat in the country, as it were. It is interesting to note that simultaneously with the ripening of chestnuts the thing has broken loose again, and while its Southern Education Board is seeking a standing in Arkansas approaches upon Nashville for an invitation for it are again being made. For the benefit of persons who have never heard of the thing before, or who have forgotten the facts of its somewhat devious career, it may be stated that the Conference for Education in the South is one of the main publicity agents of the Ogden Movement for "uplifting" the South by way of its democratization through Hampton and Tuskegee institutes, and that it is the mother of the \$42,000,000 Educational Trust incorpo-

rated in the General Education Board of New York, which has sympathetically been described as follows:

With this financial power in its control the General Education Board is in a position to do what no other body in this country can at present even attempt. It can determine largely what institutions shall grow and in some measure what shall stand still or decay. . . . Its power will be enormous. It seems as if it might be able really to determine the character of American education.

A UNIQUE TYPE OF STEEL CAR.

The Union Pacific Railroad Co., which surprised the transportation world a year or two ago by the production of a gasoline motor car of unique and excellent design, has now turned out an all-steel passenger coach which embodies radical departures from established practice in car construction. In its general appearance the car much resembles the latest types of motor cars built by the Union Pacific, but it is very different-looking from the ordinary passenger car, and, indeed, differs very much from steel cars used by other railroad companies. While it is as long as the regular standard passenger car, it is two feet lower, a decrease of 24 inches having been made in the height from rail to roof, this being accomplished by doing away with the upper deck, which is lined with ventilators in an ordinary car. The windows are round instead of square, each glass being two feet in diameter and enclosed in a circular sash made of aluminum. These windows, it is stated, are both weather and dust proof, yet they can be opened at will, swinging upward. Another radical change is doing away with the steps at each end of the car, entrance being afforded through vestibules in the middle, one on each side. There are end doors, of course, but only for use to pass from one car to the other through the end vestibules. The ends of the car are rounded to lessen danger from telescoping in case of collision and also to reduce air resistance. The entire car is fireproof and very strong. Its walls, however, are only two inches thick, which allows an increase of seven inches in the width of the aisle, which runs from one end of the car to the other, this adding much to the comfort of the vehicle. It is said that the central entrance proved very satisfactory on the motor car; hence its adoption in the new steel passenger coach. The ventilating arrangements are said to be very perfect, and the steam-heating pipes are so arranged that the incoming fresh air may be heated to any desired temperature. Electric lights are used for illumination at night, these being distributed along the sides of the car at about the top of the windows.

In the production of this novel fireproof passenger car the Union Pacific appears to have taken a valuable forward step, one which may have much influence upon future car construction. The reduction in the height of the vehicle seems particularly to be an advantage, inasmuch as it reduces the surface exposed to air resistance and renders the hauling of a train correspondingly easier. Yet this has been accomplished without detracting from the beauty of the interior; in fact, it is said that the car is handsomer with the low roof. It was designed and built at the company's shops under the direction of W. R. McKeen, Jr., superintendent of motive power and machinery.

Steel cars for passenger service are now approved by experts in railroad practice, and some of the leading roads in the country are gradually adopting

them for their best trains. Some objection has been made to the weight of steel coaches, but the Union Pacific car weighs less than 45 tons, as compared with 42½ tons for the standard passenger car, and its capacity is great, seating 78 passengers, so that there is probably less dead weight to be hauled per passenger than if the car were built of wood. Although more expensive to construct, the greater safety and endurance of steel cars is such that they will doubtless become, within a comparatively few years, the standard for all first-class railroads.

TO YOUNG MEN WHO WOULD SUCCEED.

There is a sermon to young men in a letter which Mr. Thornwell Fay, first vice-president and general manager of the Galveston, Harrisburg & San Antonio Railway, one of the Southern Pacific lines in Texas, has written to President H. H. Harrington of the Texas Agricultural and Mechanical College, concerning the employment of graduates or other students from the college by the railroad company. Mr. Fay says:

We can find employment for eight or ten energetic young men who desire to enter the railroad service and who are satisfied and willing to begin at the very ground and work up through the various departments and channels common to the transportation and operating departments of the system under my jurisdiction. . . . The school thus suggested and open to the number of young men I have mentioned means several years of active and even hard work, which will fully test the stamina of the student, for he will be compelled, in order to manifest his value and fit himself for promotion generally, to figuratively roll up his sleeves, disregarding social obligations in order to complete a first-class railroad education and adapt himself to the career which opens up in proportion to his energy and loyalty. In this connection I could offer no guarantee of any stated position. Everything would depend upon the young man's capacity and energy for his advancement, but the right men will eventually be fitted to become division superintendents, and if capable, rise even higher in the scale.

Mr. Fay paints the picture bright and true for the young man who is sincere and strong in his desire to advance; others need not look upon it. There is no use in drawing it otherwise. The youth who expects success to fall into his lap or to come to him after a short period of faint-hearted or even strenuous effort is foolish. One must work both hard and long to win the prizes which the world has for her worthy sons.

How often one hears young men lamenting the lack of opportunity, yet the opportunity which they say is lacking exists as it always has, but they are not willing, as a rule, to make the sacrifices which its development demands in order to achieve success for themselves! Or they may be willing to make the sacrifice for a while, but they are not capable, in so many instances, of sustained self-denial and control that the number who push through to success is comparatively small. Every business man of experience has at some time or other had among his employees one or more young men who were more interested in their own affairs than in business. Their attitude in these matters was evidenced perhaps in some such way as this: Toward the close of a busy day perhaps some work needs to be completed, in itself perhaps of an unimportant character, but maybe of far-reaching importance, as it so often happens small things in business are. The young man whose duty it may be to do this work either seeks to turn it over to someone else that he may get off early for some social event in the even-

ing or else he performs it in a hasty and more or less slovenly manner and goes off rejoicing that he has gotten rid of it and can have a good time during the hours remaining. But there are other things than social enjoyments which distract the minds of young men from their work even while they are supposed to be engaged in doing it, and it is lamentable that the percentage of them who fully concentrate their minds and energies upon whatever work may be before them is comparatively small. That such men fail is but natural. It would be surprising if such material succeeded.

What is the lesson to be learned from these facts? It is that for everything which is worth while one must pay something. One seldom gets something for nothing, and when it is so obtained it is hardly worth the having, even though it may be good in itself, because that which one wins by his own efforts is so doubly valued that things gained otherwise seem small. What have the division superintendents to whom Mr. Fay refers done to win the places that they occupy? It may be confidently answered that while there may be an exception to the rule, they have worked early or late without regard to their own comfort or convenience, but with the welfare of the railroad and its patrons always before them. Was there anything to be done which demanded hard and late work, maybe far from home, out in the vilest sort of weather, they went to the spot and gave up their time, their labor, yes, some of their very blood—for strenuous work tells upon the very life of man—but they gave it willingly and with no hope of other reward than the consciousness of not having failed in an emergency. There are plenty of young men who are willing to work hard, but they want the reward to come quickly and they want to work in the limelight, but it is the work which is done out of the view of the multitude and which demands personal sacrifice that tells with employers, whether they be individuals or corporations, and the men who would win should realize the fact in all its unattractiveness, that they may appreciate it for what it means in the future.

Now this little homily does not mean that young men should be expected to forsake all social enjoyments or deny themselves all forms of recreation in order to win business success. He who takes his recreation sensibly and with a view to its beneficial effects upon his working capacity, placing his work first in his mind, will succeed even better than the plodder who never leaves his task to take a breath of fresh air. Perhaps it may be said that contentment with mediocrity is a fault afflicting too many young men. They do not want to do more than "get along;" to get sufficient money to keep them and provide them with enjoyment. Such will always be among the "also rans" in the race with the young men who put their business before pleasure, who never hesitate to sacrifice comfort or convenience to their work, and who give their utmost abilities and energies to business, never making a social engagement which may not be broken for more important duties.

Let young men, therefore, give up a large part of their diversions in behalf of the success which they would obtain. Reward is sure to come to them if they are faithful and fearless, always ready to assume responsibility when it is offered them and giving their very best effort to prove that they are worthy of the trust.

A VISION OF INDUSTRY.

One of the clearest and most succinct statements of the claims of a community upon the attention of would-be investors in industrial enterprises was embodied in the address of Mr. J. S. Daugherty in his invitation to the European cotton spinners on their recent tour through the South to visit Houston. The address has been published in attractive pamphlet form and should be read as a model in every city seeking to attract investments and population. In addition, it is valuable as throwing light upon the possibilities, from the Houston viewpoint, in the improvement of the waterway between Houston and the Gulf of Mexico. On that point Mr. Daugherty said:

Houston is a city of 80,000 population, situated on an arm of the Gulf of Mexico, 50 miles interior, at an elevation of 35 to 50 feet above the Gulf. The United States Government is engaged, at an estimated cost of \$4,000,000, in canalizing this arm so that vessels drawing 25 feet of water can go from the Gulf under their own steam to the wharves of Houston. The distance from the mouth of the Jetties at Galveston by water to the turning basin at Houston is 57½ statute miles. Six of the great railway systems of the United States now possess terminals on this ship canal, viz., the Harborman system, the Gould system, the Atchafalaya system, the Rock Island system, the Frisco system and the Missouri, Kansas & Texas system.

Now, as to the possibility of her canal. A channel 18½ feet deep has already been practically obtained at a cost of less than \$2,000,000. The undertaking is the duplicate of what the Germans accomplished at Bremen. Bremen is located 50 miles interior on the Weser river from Bremerhaven. For ages the foreign commerce of Bremen was lightered up and down the Weser river between Bremen and Bremerhaven. In the 70s the German Government began the deepening of the Weser river, and in less than 10 years accomplished the work at a cost of \$7,000,000, so that now deep-draught vessels can steam up the Weser to Bremen and discharge and receive their cargoes.

The Houston canal is no such undertaking as the Manchester canal, with its numerous and immense locks and 100-acre turning basin. The Houston canal is a tidewater canal, in touch with the Gulf that will fill any channel that may be dug. The territory tributary to Houston as its seaport does not now possess more than one-tenth the population of which it is capable of sustaining, yet it has had sufficient political influence to secure an appropriation sufficiently large to have undertaken a 25-foot channel. When this region becomes more densely populated, if the demands of its commerce require a 35-foot channel there is no reasonable doubt but it can secure the appropriation to make it. Twenty-five miles of this canal lies through a well-drained, elevated and healthful district, furnishing beautiful and excellent sites for factories of all kinds. Railroad tracks can be brought in and laid alongside the slips that can be cut in the canal to the factory sites wherever desired, and ships be berthed and loaded, from whence they are in touch with every port reached by the tides of the Atlantic; and when the Panama canal is completed, those of the Pacific. If the market is interior, shipments can be made by rail to all railroad points in North America.

Houston will be an open port every day in the year. It will not be blocked for months in the year with ice, as are the Great Lakes, and as a long stretch of the canal from the mouth of the Mississippi river to Chicago will, when it is built. We of Houston believe and hope that this canal may be built. We feel that the commerce of the great central basin of our continent demands it. But note the natural conditions that environ it, and that must be reckoned with, when one is choosing a site to compete in the world's commerce. While we claim for Houston, and are in position to demonstrate it, that she is the strongest point in the United States to locate any factory that has a market for its products, that portion of the United States west of the 96th meridian—Mexico, Central America, West India Islands, the west coast of South America, Oceania and the Orient—we will only call your attention to some of its strong points as a site for the cotton-manufacturing industry to command the markets of the earth.

The points of strength for manufac-

turing enumerated by Mr. Daugherty included the facts that of 4,174,206 bales of cotton grown in Texas last season, nearly one-third of the entire crop of the United States, Houston handled 2,679,422 bales, or more than were manufactured in the New England mills during that season; that within 100 to 125 miles of Houston are immense deposits of brown coal which is laid down in Houston at \$1.65 a ton, and which, converted into gas, has a greater power-producing capacity per ton than bituminous coal, and that, with the completion of the Panama canal, cotton goods from Houston can be laid down at Asiatic ports at about one-half the present freight charges paid by Southern mills. He mentioned, too, the proximity of Houston to the sources of food supplies and its own advantages as to climate, and in respect to labor pointed to successfully-inaugurated plans for attracting hundreds of thousands of workers from abroad to Galveston, less than 60 miles distant from Houston.

His vision of a stretch of 25 miles of canal lined with factories, standing at slips into which ocean-going vessels can enter under their own steam to carry away manufactured goods and in touch, through railroads, with sources of food and material, and his comparison of that canal with great European undertakings of the kind, appeal strongly to the imagination of individuals accustomed to thinking industrially a few years ahead, and they may appeal to the practical intent of certain of the European visitors who propose to invest in the South.

VIRUS OF THE FEE SYSTEM.

If the extra session of the Louisiana Legislature called for November 11 does nothing but make effective the first suggestion in Governor Blanchard's call looking to a reduction of the salaries, fees and compensation of existing public offices in the State, the placing of officials upon a salary basis and the covering into the State Treasury of fees and perquisites of office now enjoyed by the incumbents, it will not meet in vain. Complementary to this is the second suggestion in the call of an abolition of unnecessary offices and a consolidation of necessary ones. These suggestions call attention to a condition, by no means monopolized by Louisiana, but quite common in other parts of the South, in some cases to the point of scandal, where there is most urgent need of reform, the urgency being greater than the need for decrease in taxation. As a matter of fact, the trouble with many States is not so much a high rate of taxation as the squandering of the moneys raised by taxation upon unnecessary offices and upon undertakings giving the pretext for the support of the unnecessary offices. In that respect individual States merely reflect the practices in the Federal Government, which is adding almost daily to its army of officeholders, or, perhaps, it would be better to say to the camp-followers of its army. This burden upon the people comes from their acquiescence in the conduct of public affairs upon a political instead of a strictly business basis and upon the theory that public office is to be used to build up a machine for the promotion of political party interests, or, still worse, personal ambitions in the garb of patriotism, instead of for the service of the people.

The aim of American politics is to make at least two offices grow where one would suffice, and, when such offices are upon a fee basis instead of a salary

basis, the ideal condition—ideal from the politician's standpoint—is reached. Fees are the roots of the corruption upon which average American politics thrives. They attract to the support of a party an element in society monopolizing the willingness to do the wrongs upon which party success not infrequently turns. They are sure means of oppression, and, therefore, ready means for whipping into line the mudsills of the suffrage. They are at the same time a direct tax upon the producers of a State more burdensome than the taxes levied for the payment of salaried officials, and even more elusive when any attempt is made to check their growth.

In addition to the moneys squandered upon a superfluity of officeholders, there is an enormous waste of moneys raised through taxation in the reckless or ignorant handling of legitimate undertakings, such as public education. There, too, the curse of personal or party politics enters. A beginning of a much-needed reform will be had when the fee system is absolutely destroyed and when payment to public officials is only in proportion to the services rendered. Such reform effected will enable the people to enjoy the services of qualified employees in State and municipal administrations, in the public schools, etc., and to pay them adequately.

ECONOMIC MOLLY-CODDLEISM.

It really seems that the next thing to be done is to call a National Mosquito Convention to provide for the Federal suppression of mosquitoes. Federal action by wholesale for the drainage of swamps will be incomplete without providing at the same time for the Federal suppression of mosquitoes, lest, driven from their historic homes, the mosquitoes take up their residence in other parts of the country. In spite of the fact that science, so-called, has not yet decided whether mosquitoes are responsible for malaria or malaria is responsible for mosquitoes, it is sufficient for advocates of National Conferences for the suppression of any human ill to argue that there is absolute necessity for a National Mosquito Convention to provide for the Federal suppression of mosquitoes, because mosquitoes breed in swamps and because the swamps should be drained by the Government because the Government is irrigating arid lands.

Seriously speaking, it is straining the notion of Government control of human activities to the breaking point when, in support of the contention that the drainage of swamp lands in this country is a Federal governmental function, the main arguments are that the ever-decaying vegetable matter of swamp lands is a constant menace to the health of the entire country, and that, if the Government can engage in the irrigation of arid lands, it is perfectly proper for it to drain swamps. It may be perfectly proper for the Government to reclaim by irrigation or by drainage lands belonging to the Government, and also to lend its good offices for overcoming the difficulties that might otherwise prevent effective co-operation to the same end where swamps or arid lands are not limited by the boundaries of separate States. But there is no more reason why the Federal Government should concern itself actively in the reclamation of land wholly within the boundaries of one State than there is why a State government should drain or irrigate land owned exclusively by one person.

In this day of popular contempt for mental or physical molly-coddles it is

amazing that American Intelligence should give the slightest consideration or encouragement to movements for the development of political and economic molly-coddleism. But the publicity atmosphere is full of schemes promoted directly from Government quarters or looking to co-operation from that source calling for Federal aid to education, to farming, to irrigation, to drainage and to what not, all of which, unchecked, is a menace to the body politic far exceeding in virulence any possibility of injury to the human system from swamp-bred mosquitoes. It is molly-coddling of the most pernicious sort, for it saps the integrity and self-respect of the people of the country, and, training them to dependence, weakens their powers to resist persistent efforts to reduce to the minimum the liberties of the individual.

REFORMING STATISTICS.

The question of the limits to which Government bureaus should go in collecting and disseminating information on a variety of subjects is brought to the front again by the proposition, credited to Secretary Straus of the Department of Commerce and Labor, to combine, for the insurance of greater accuracy in statistics and for economy's sake, a couple of the bureaus in the Department. Both of these bureaus should be essentially statistical, but both of them have in times past carried statistics to the point of extravagance and inutilty and have attempted a task, not pertinent to any bureau of the Government, of giving a twist to the figures in one direction or another. In fact, it was notorious some years ago that the twist given to the figures in one bureau, not then connected with the Department of Commerce and Labor, which, indeed, at that time had not been loaded upon the country, was in any direction demanded by the political exigencies of the party which happened to be in power, and consequently the statistics lost much of the real value which should attach to information furnished under Government auspices. They had, nevertheless, for the uninformed the weight of authority, simply because they came from Government sources, and the natural presumption on the part of the inexperienced was that they were disinterested and could be relied upon. That presumption is appealed to too often today in outgivings of Departments at Washington, and the confusion thereby induced in the public mind is not infrequently intensified by the failure of the figures or the deductions based upon them by different bureaus to harmonize. There is a tendency also to add to the number of employees in the Government bureaus, to increase the printing bills and to add to the expenses generally far beyond the needs of the country and far beyond the legitimate domain of the Government as a source of accurate information. The publication facilities of a Department or of some one of its bureaus are too often employed to further purely partisan or personal ends, to exaggerate the importance of the Department or the bureau, or to crystallize some sociological whim appealing to the ambition of a temporary occupant of political office.

Reform in this particular may never be accomplished, however crying the need for it may be. It is, however, worth essaying. But Secretary Straus is hardly grazing the surface of the reform in advocating the merging of two bureaus in his Department which were doing efficient work before they were absorbed as a basis for the bureau and have done good work since. If he really

wishes to hasten reform, to eliminate worse than unnecessary expenses and to serve the country, he should lend his influence to the disestablishment of the division of information in the Bureau of Immigration, to the reduction of the Bureau of Labor to a purely compiling division of the Census Bureau, to the limitation of the work of the Census Bureau to mere compilation of facts and to the elimination from his whole Department of dealings with sociological theories and economic fads. That might really result in the disestablishment of the Department itself. But the country would not be damaged should that occur.

NEGROES IN MILLS.

In reproducing, with some suggestions of its own, our comments upon the advice of Director of the Census North that Southern cotton mills might solve the labor problem by utilizing negro labor, our friend, the Macon (Ga.) *Telegraph*, seems to have missed our point entirely. It says that we seem not to know that the experiment of employing negroes in the cotton mills in the Carolinas has been tried and has failed. In that the *Telegraph* is mistaken. Even Director North referred to such failures. The object of our comment was to discourage any suggestion likely to strengthen efforts in other parts of the country to keep the negroes massed in the South. Success of the experiment of using negroes as operatives would tend mightily to prolong this massing. We care not whether or not the cotton mills might be materially benefited by such success. That is of minor importance. We are looking to the real benefit of the negro and of labor generally in the country. Both elements would be injured by massing the negroes in any industry or in keeping them massed in any community.

NEED OF CURRENCY REFORM.

In today's issue we publish a letter from Mr. T. G. Bush of Birmingham, who was one of the active members of the Monetary Commission, organized a few years ago with Mr. H. H. Hanna of Indianapolis as chairman. Mr. Bush calls the attention of the country, and especially of the South, to the great need of currency reform, pointing to the losses which have fallen upon cotton planters and all other business interests by reason of the failure of Congress to enact a currency bill which would meet just such a situation as the present. We invite correspondence from business people of the South upon this same subject.

THE DAMAGE WROUGHT.

Mr. H. F. DeBardeleben, one of the pioneers of the Birmingham district, has written to the Birmingham *Age-Herald* a strong appeal against current executive and legislative attitude toward the railroads. Referring to the early days of the district, he mentions the more than liberal treatment of the iron men by the railroad in times of stress, says that the Legislature at its last session wrought injury amounting to millions of dollars, warns against continued adverse legislation that will prevent the flow of capital into the State, and adds:

"This thing looks ugly to me. The national agitation, coupled with what our own State government is doing, is a frightful thing for us to contemplate. For months cotton goods have been selling at a price based on 15-cent cotton, and had it not been for the unwise agitation, both North and South, as to how properties should be managed and operated as cor-

porations, we would be in a flourishing condition and there would be no fear for the forthcoming of money for any real meritorious enterprise. The price of cotton goods is an affidavit from the spinners that they were to pay 15 cents per pound for cotton this year, and were it not for this political agitation the farmers would be receiving 15 cents for their cotton today. It has cost the South more than \$200,000,000 which the cotton crop would have brought in excess of the price it is now bringing. I am of the opinion that it would have been cheaper for the Birmingham district to have assumed to pay the entire taxes of the State than to have had this war upon capital brought about."

SOUTHERN PETROLEUM.

In its issue of May 9 the MANUFACTURERS' RECORD estimated that the output of petroleum in the South in 1906 had been 32,000,000 barrels. It is the habit of the MANUFACTURERS' RECORD to let conservatism sway it in its estimates of Southern development, preferring to understate rather than overstate the figures. The petroleum estimate of six months ago was no variation from the rule, for the official figures of the United States Geological Survey show that the 1906 petroleum output in the South was 32,979,908 barrels, the production in these several States being—Texas, 12,567,897 barrels; West Virginia, 10,120,935; Louisiana, 9,077,528, and Kentucky-Tennessee, 1,213,548 barrels. The output in the United States was 126,493,936 barrels. The South produced more than 26 per cent. of the total output in the country. Its 1906 production was 6,000,000 barrels greater than the total production of the country in 1880.

SOUTH CAROLINA.

Evidence that the forthcoming handbook of the resources of South Carolina will be one of the most valuable State publications of its kind is accumulating with the issuance of every set of advance sheets from the Department of Agriculture, Commerce and Immigration, under the direction of Commissioner E. J. Watson. We recently called attention to the chapter on the water-powers of the State. To that has now been added "The Story of King Cotton in South Carolina," profusely illustrated with half-tone engravings and containing a mass of lucid information about the growing and handling of the products of the cotton plant. Simultaneously there has been issued "A Summary of the Mineral Resources of South Carolina," by State Geologist Earle Sloan, of detailed and accurate character. These publications are valuable additions to the literature promotive of the material development of South Carolina.

UPBUILDING.

During the past year, according to estimates of the industrial department of the Illinois Central and the Yazoo & Mississippi Valley railroads, \$10,000,000 of new industrial capital have been brought into the portion of the South served by those lines. On the Yazoo & Mississippi Valley Railroad 48 new industries, employing 3237 men, and with the combined capital of \$2,822,500, and on the Illinois Central Railroad 94 plants, employing 7264 men, and with a combined capital of \$11,466,700, were established. Some of these investments along the line of the Illinois Central Railroad were outside the South.

THE COTTON MOVEMENT.

During the first two months of the present season, according to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight was 2,689,634 running bales, a decrease under the same period last year of 645,837 bales. The exports were 1,257,889 bales, a decrease of

323,231 bales. The takings were, by Northern spinners, 237,321 bales, a decrease of 70,227 bales; by Southern spinners, 479,510 bales, an increase of 2195 bales.

SECRETARYSHIP WANTED.

Commercial clubs or boards of trade in the South desiring the service of a secretary will find an advertisement in our "Classified Opportunities" which may interest them. Recently we have had several commercial organizations asking us to assist them in finding a secretary. These positions, we believe, have been filled, and now this is a case where a gentleman familiar with this work is seeking such a position.

CORRECTION.

In special correspondence in last week's issue of the MANUFACTURERS' RECORD dealing with the work of the Board of Trade of Bristol, Tenn.-Va. the combined capital stock of 19 new industries secured through the efforts of that organization should have read \$2,000,000 instead of \$2000.

THE COAL PROBLEM.

Involved in the Railroad Situation and Labor.

Hywel Davies, Kenesee, Ky., vice-president and general manager Main Jellico Mountain Coal Co., writes to the MANUFACTURERS' RECORD:

"Much could be written in extenso regarding the condition of labor and transportation question in the South. The writer operates mines on the three great Southern railway systems, namely, the Illinois Central, Louisville & Nashville and Southern Railway. Neither road makes any claim that it can furnish the mines' requirements, because the prosperity of the South has advanced at a greater ratio than the railroads have been able to increase their facilities to handle the increased business. Last winter the Louisville & Nashville furnished 75 per cent. of our requirements, the Illinois Central about 60 per cent., while the Southern Railway made no pretension to furnish more than 35 to 40 per cent. I refer especially to commercial business, and not to mines furnishing railroad fuel. This fall the three systems are about equal in their supplies, which vary from 50 to 60 per cent. of our actual needs. This shortage naturally affects labor, because miners discriminate in favor of the mines where the most money can be made for a given day's work, since they do not get over 60 per cent. work time; hence the mines with the favored physical working conditions do not suffer for want of labor to the same extent as the mines working the same time, but where the physical conditions are such that the same wage cannot be earned. Of course, you understand that practically all miners are paid by piece work, so that under the most favorable conditions in one mine the miners can earn \$4 to \$5 per day of 8 to 10 hours, while under adverse conditions the same miners cannot earn one-half of this amount. With regular work the labor supply, where the living environments are satisfactory, becomes more established even at the adverse mines than it is when they work only two or three days per week. In other words, transportation and labor are thus linked together, and cannot well be discussed except in their mutual relationship.

"As to the remedy, I think it is more important to double-track the Southern roads than anything else, because with our present single-track system car mileage is from 12 to 20 miles per day, while the Pennsylvania, with its double-track system, secures in car mileage 25 or more miles per day, thus demonstrating that if the Southern roads had the same facilities

the efficiency of the present equipment would be increased very materially.

"But what good is there in making such a recommendation at a time when railroads cannot get money for such improvement? Several other features of this important question could be discussed, but I think I have touched on the most vital phase."

R. W. Carr, manager Carr Wood & Coal Co., San Antonio, Texas, writes:

"Our operations have been hampered during the season by the lack of open coal cars, and sometimes by the lack of cars of any kind. Labor has also been scarce and high-priced, but the lack of transportation facilities has been the drawback. The trouble seems to be in the Southwest that the railroads have an insufficient amount of equipment, both locomotives and cars. Some of the railroads complain that as soon as their cars leave their own lines they are not returned, but are used by other railroads, to the detriment of the owning company.

"The lignites are fairly promptly handled, but the bituminous coal from the Indian Territory is frequently confiscated by the railroads, and is very much delayed by congestion at division points and the coal is frequently tied up for days at terminals, owing to insufficient switching facilities. This is particularly true in this city, where the Missouri, Kansas & Texas Railroad and the Southern Pacific use the same terminals.

"The conditions were as bad a year ago as they are now, and I have a letter from one of the largest sales agencies for the territory coal, under date of October 22, saying that the coke companies have been out of commission for the past 30 days on account of extreme shortage of cars and scarcity of small coal. The letter also says that the mines of the Missouri, Kansas & Texas were shut down on account of railroad withdrawing their switch engines and locomotives to relieve the condition at their division points.

"The scarcity of empties in general is caused by the railroads failing to promptly deliver the coal and return the empties, as the loaded cars stand in their terminals from one to two weeks after arrival before they are placed for unloading.

"As a remedy I suggest efficient State and Federal reciprocal demurrage laws."

Bluefield Coal & Coke Co., Inc., Bluefield, W. Va., writes:

"Relative to inability to fill orders for coal, the trouble is due to lack of transportation. We have been a little short of labor, but only when cars were plentiful and the men would work but one-half to three-fourths the time they could have worked had they preferred wages to loafing.

"The lack of cars is due principally to inefficiency, recklessness and an utter disregard on the part of the bulk of railway employees for the safety and economical handling of the company's equipment, resulting in rough handling, derailments and collisions, which put out of service the rolling stock about as fast as the company can repair the old and provide the new.

"We have plenty of people in this country to do all the work wanted, but the great majority who live by manual labor prefer fewer hours and fewer days, and by their organizations are getting the same. This causes carelessness, inefficiency, shortage of labor products and higher prices on that which is produced. The only place where labor cannot 'beat' his taskmaster is on the farm, where results are in proportion to the sweat that falls from the brow; therefore the farm has not only been deserted by the laborer, but is frequently being left alone by the owner.

"Things are beginning to right themselves, and when the country gets in such

shape as to cause our people to work, then, and then only, will the material things be produced which are essential to mankind, and which are as good to us at a low measure of value as at a high.

"The market for Southern coal has advanced, but no more than should have been expected, and no more, proportionately, than the advance of other commodities throughout the country."

Mr. G. B. McCormack, president Pratt Consolidated Coal Co., Birmingham, Ala., writes:

"Conditions have, of course, materially changed since your letter, but up to this time the coal business has remained in a very satisfactory condition. Should any large number of blast furnaces or other large consumers of coal close down it would, of course, throw on the market some surplus coal.

"The supply of cars has been reasonably good with this company, and while, as you know, there was considerable favoritism shown by some of the railroad companies in the distribution of cars, the coal operators got together with the railroad company most at fault and made an amicable arrangement with it for an impartial distribution of cars. So far as I know, there is but one railroad in this district which shows any favoritism with its cars. It is not believed that the higher officials of the company referred to are cognizant of the facts, but it is winked at by local officers. With this single exception, there is probably as good feeling between the coal operators and the railroad companies as ever existed in this State. Your recent editorials counseling business men to stand together have undoubtedly done much good. The country surely needs peace and quietude and less agitation by professional politicians."

Making Rubber in Texas.

Dispatches from San Antonio, Texas, refer in an interesting manner to the completion of the plant built at Marathon for manufacturing rubber from the guayule plant. They state, in part, as follows:

"The factory built at Marathon, the first of several contemplated, began the manufacture of rubber from the guayule shrub last Friday, and the results were most satisfactory.

"This enterprise was undertaken by San Antonio capitalists, headed by Otto Koehler, who readily saw the advantages offered by Marathon in its proximity to the best guayule forests in the State, and assurance of a bountiful supply of good, clear water.

"John J. Stevens and other San Antonians are interested.

"The company owns outright many sections of patented land covered with guayule, and has contracted with numerous private landowners for the shrub growing on their lands.

"It is estimated that the company now owns or controls more than 75 per cent. of the guayule growing in the State of Texas.

"Not only because of the wages paid to many men employed has this industry become an advantage to Marathon, but it has also made it possible to irrigate a considerable body of adjacent land with the overflow and waste water used in the plant.

"Already may be seen a large field of sugar-cane in waving tassels nearby.

"More land will be brought into cultivation, and the owners expect to raise an abundance of alfalfa, vegetables and fruits, necessities that have heretofore been almost entirely shipped in."

Mr. C. B. Carlisle, secretary of the Business Men's Club of Huntsville, Ala., is endeavoring to interest an Ohio concern in the opportunities for celery-growing in the vicinity of Huntsville.

Southern Public Spirit vs. Politicians.

[Written for the Manufacturers' Record.]

Has not the time arrived for the business interests of the South—the men who produce its cotton and grain, the men who market these staples, the manufacturers and all others who realize the infinite harm that has been done by the politicians—to get together and determine that the politicians shall no longer rule and ruin the land? It needs but an awakened, united, determined public spirit on the part of men, who see that already this section has suffered not by millions only, but by tens of millions of dollars, lost through the work of political agitators, to turn the tide. When such an uprising takes place these very politicians will eagerly scramble to get into the band-wagon. Then we shall see the very public men whose work has cost the South tens of millions of dollars—men who have spurned the advice of the South's great business leaders—in an eager race to join the new movement and pose as leaders in State development.

In Alabama Henry F. DeBardeleben, one of the pioneers in the iron industry in that State, has made an appeal to the public which has met with a quick response. In a public letter he told of the splendid work which the railroads had done for that State, and urged the people of Alabama to rally to the support of conservatism against the radicalism that has done such vast harm to the interests of the State. The *Age-Herald* of Birmingham had hardly published this appeal before letters commenced to reach DeBardeleben approving his course, and in its issue of November 4 the *Age-Herald* had the following:

"H. F. DeBardeleben, one of the pioneers of the Birmingham district, who has been here through days of prosperity and days of adversity, made the following statement yesterday:

"To the People of Alabama and My Fellow-Townsmen of Birmingham:

"Are you asleep? If so, wake up! There is danger ahead. You seem to think that with the script to be issued by the banks that we will float along in a satisfactory condition, but when cotton and lumber reaches the bottom and pig-iron takes a tumble its mighty weight will drag everything down with it. Real estate is always the last thing to decline, and when it does I pity the man with many deferred payments on his property. I hope that no good citizen will sit still and not take a hand in warding off this great evil. Everyone should certainly make an effort to take care of that which is his. Every man, whether property-owner, merchant, professional man or laborer, is vitally interested in this matter. When labor goes down to a point where the laborer can barely live the merchant and others who are benefited by the money spent by the workingman will realize that there is something radically wrong.

"This is not a panic caused by a lack of business or scarcity of money, but it has been caused from fear. We all fear that if we invest or loan money that we may never get it back. When you play a legalized take-away game, as is now being attempted in Alabama, it's time to be scared. Those who are causing this scare, for their own sakes, should cease. When business men find that they have made a mistake they make haste to correct it.

"Some of you have no doubt read what I had to say in an article given to the press a few days since on the question of an extra session of the Legislature, and I ask that each and every man who read that article and agrees with me on the views as expressed therein write me (as many have

already done) and give me their indorsement, the same to be used for the benefit of all. In addition to this, I will also ask that you write to your acquaintances in the Legislature and ask them to call a halt. Alabama has many strong-minded men, and they should not sit still and fail to raise their voices in an effort to reverse the current which, if allowed to continue, will be blasting to all interests. Now is the time for action. Let us meet the issue like men and try to stop the destruction of our railroads, for if they go down many will sink with them.

"Below you will find copies of two letters I have received, which speak for themselves.

H. F. DEBARDELEBEN."

"Birmingham, November 1, 1907.

"Mr. H. F. DeBardeleben, Birmingham:

"Dear Sir—I read with a great deal of interest your communication to the *Age-Herald* of this date. You have very forcibly and plainly put the case as to the benefit the railroads have been to this district, and also your argument is unanswerable as to the inadvisability of the State in any manner oppressing or injuring these properties that are so necessary to our existence and prosperity. I hope you will follow this matter up by calling a mass-meeting of the citizens, as you suggest, including all classes, so that we may make a protest in this district that might possibly have some influence with some members of the Legislature. Very truly yours,

"T. G. BUSH.

"Birmingham, November 1, 1907.

"Mr. H. F. DeBardeleben, City:

"Dear Sir—I wish to express my high appreciation of your letter in today's *Age-Herald*. It sounds a true note.

"I certainly hope that you will have thousands of readers throughout Alabama, and that all readers will consider what you say soberly and without prejudice. With best wishes, I am, yours truly,

"B. F. MOORE,

"Treasurer Moore & Handley Hardware Co."

The *Dallas News*, which has always stood for the best interests of Texas, in discussing the need for more railroads in that State and the inability of the people of Texas to provide the capital for their construction, presents some facts which are applicable not only to Texas, but to every State in the South. On this point the *News* says:

"The truth about the matter is that certain of our statesmen are taking a very narrow, costly and dangerous view of the railroad problem. To begin with, there are cattle to carry, grain crops to finance and cotton crops to move, and vast sums of money are required to carry on the regular business of the Texas citizen. This does not measure one-half the demand for the money of the people. The heavy expenses of government must be met, cities and towns built up and improved, new farms opened and stocked, schools kept going, roads improved, better bridges provided, and there are numerous other demands to meet. The *News* is eager to see the people of Texas proceed to build factories, railroads and other enterprises that are badly needed. Its desire and its record as to that will not be questioned. But to expect a general turn to railroad building as matters now stand would be both futile and foolish. Texans need their money for other uses, and few of them favor State ownership of railroads. This leaves only one way open, and that is to invite accumulations of outside capital to come in and supply new arteries of com-

merce and development, and to improve to the best standard the roads and equipments we have already.

"The *News* is quite convinced that a very shortsighted and costly policy has been pursued with reference to this means of serving the people and developing the State. As the *Age* says, hundreds of communities in the big State of Texas are crying for railways and expressing surprise that capital does not hasten in to build them. There is good reason for the cry. Capital from without—'foreign capital'—already has built about 13,000 miles of railways in the State, and yet nearly 70 of the 245 counties in Texas remain untouched by a railway track, and many others are barely reached by or just crossed at one corner by a single road. Many county-seats, some of considerable importance, still are 30, 40 or 50 miles from the nearest railway. In the eastern section of the State north and south railways jostle each other and compete eagerly for business at the principal points, and a few long lines stretch across the State from east to west. But the greater portion of the 266,000 square miles of Texas territory lies far from sight or sound of the locomotive. In spite of the overcrowding of lines in certain sections, the railways average only about 4.6 miles to each 100 square miles, compared with over 21 miles in Illinois. There is room for 60,000 miles, where the total now is less than 13,000.

"As far as the *News* is concerned, it believes in giving to investors the world over a standing invitation to come in and supply this convenience to the people, and with such invitation there should go the assurance that investors will be fairly treated and will not be pulled into campaigns as the scapegoats of politicians in search of 'soulless corporations' to carry their burdens for them."

It is very easy for some of the politicians in the South, who have never done a constructive piece of work for the up-building of their country, who would not today invest a dollar of their own money in the building of a new railroad in their

State, to denounce the railroads. The plea, too, that anti-corporation laws must be upheld does not obscure the influences that really led in the enactment of such laws regardless of material consequences, and under a spirit of hostility which has made it impossible for some States to attract new capital for railroad expansion, and have halted the progress of their own States. Politicians may claim that they have done it innocently, or not, as they please; but the progress has been stayed, and present and future generations will hold them absolutely responsible for having helped to destroy the magnificent prosperity which these States were enjoying before their advent. They may try to shirk the responsibility, but, nevertheless, unless they turn from the policy which they have pursued of ceaselessly denouncing the corporations, frankly admit the mistakes which have been made, and, to the extent of their ability, undertake to guarantee to railroads and other corporations the most liberal protection, they will deserve, as they will inevitably receive, the bitterest condemnation of the people of their own States and will go down to their political graves unhonored and unsung.

The outside investor in Mexico feels entirely safe. He knows that if there should come a question in which the scales of justice were evenly balanced between the local man and the outside investor that the courts would decide in favor of the latter, on the principle that he is the invited guest of Mexico, and as such Mexico is in honor bound to give to him to the utmost limit of its ability the fullest possible protection. Contrast such a condition with the spirit which animates some of the State administrations not only in the South, but in the country at large. The contrast is so great that one can but wish that we might import from Mexico some of its high sense of honor and its realization of the fact that such a high sense of honor is likewise profitable financially.

Will the South heed the call? Now is the time when every man who realizes his responsibility must act or prove recreant to his State and to his own honor.

URGENT NEED OF CURRENCY REFORM.

Editor *Manufacturers' Record*:

Recent events in banking circles certainly will cause all thoughtful business men to consider the urgent need of currency reform. This question was thoroughly thrashed out by the Monetary Commission during Mr. McKinley's administration, and there was unanimous report showing the necessity of more elastic currency to meet business requirements. The recommendation took the form of bank circulation, based upon assets, with such restrictions as to make the plan safe, and at the same time meet the business requirements of the country. The deliberations of the Monetary Commission were promulgated in voluminous report, which has had extensive circulation, and the commission, at the first session of Congress following the publication of its report, impressed upon the committee on banking and currency the necessity of doing something. The commission was not wedded to any particular form, but many of its members had the prophetic foresight to see the situation would become more acute as our country should grow and business should expand. There have been various proposals in and out of Congress with reference to legislation to meet the demands of business for currency, but no one has been generally accepted. For a long time the New York bankers did not feel the need of facilities for making the currency more elastic, depending entirely upon what they called deposit currency. However, I think

now that they are all convinced that something must be done, which is evidenced by the recent action of the Bankers' Association of the United States, in which a plan was proposed and recommended. It is estimated that if this plan were in operation at this time it would provide for \$225,000,000 of currency in addition to what we now have. It has been very properly stated that clearing-house certificates are neither more nor less than asset currency, and the banks of different States have found the necessity of such a currency and have realized the relief which it brings. As soon as the necessity ceases to exist for the use of clearing-house certificates they are called in, and the same would be the case in emergency currency, as the tax on such currency would be such as to prevent its circulation unless absolutely needed.

The need of legislation affecting currency reform is greatly felt at this time in the South, and a lack of currency for moving the cotton crop is causing Southern farmers to lose millions of dollars. This fact alone should awaken the representatives of the South to the fact that prompt action should be taken. It seems to me that Congress can well adopt, with such reasonable modifications as may be thought wise, any plan that would be recommended by the united bankers of the country. The present monetary system, so far as providing currency for the business of this country in its great extensions, is no more

suit to the conditions than a 15-year-old boy's coat is suited for a grown man. While the business of the country has expanded enormously, our monetary system is the same it was when we were operating on a comparatively small scale. I think it well that the press of the country should agitate this question in such a way as to bring relief as early as practicable.

Very truly yours,

T. G. BUSH.

Birmingham, Ala., October 31.

TO HANDLE COAL ECONOMICALLY.

Great Pier of the Virginian Railway at Norfolk.

[Special Cor. Manufacturers' Record.]

Norfolk, Va., November 5.

"It will be a long time before this city ceases reaping the benefits that will come to it through the Jamestown Exposition. As an investment for direct returns the subscriptions to stock in that enterprise may prove a losing one, but indirectly they will pay handsomely. No man who has visited the city, and who has understandingly studied Norfolk's location in connection with the rapid development of the entire country, can fail to be impressed with the fact that it must grow into a very large city. Its harbor, as everybody knows, is one of the best on the Atlantic seaboard, and it affords the most convenient shipping point for a vast extent of the most productive territory in the whole country, both in agricultural products and manufactures, while for the great and rapidly-developing coal fields of Virginia and West Virginia it has no rival as a port. The stringing together by ship canals of the inland waterways from New England to Georgia—and this is among the certainties of the future—will add greatly to the strategic position of the city and will do much to attract to it the attention of the world. Then it already has a good basis of growth. I suppose since the exposition began at least 1,000,000 people from abroad have stood at this corner and looked up and down these streets, and all were impressed with the substantial appearance of the city. It has good buildings, fine streets and a population that shows energy and thrift in every way. Those who have looked into the financial situation have found the banks solid, with plenty of money, and business conducted along the safest and most conservative lines. It seems to me I can foresee here one of the greatest of coast cities in the not very distant future."

Thus spoke a citizen of Dallas, Texas, one of the enterprising, ambitious men who have built there on the prairies of the Lone Star State a city that is an example and an inspiration to the entire country. He undoubtedly described the situation in his few but succinct remarks. There are many things in which Norfolk's position is so strong that there can be no denying the fact that the future is full of potentialities for great growth and great wealth. Hampton Roads has been chosen as the shipping point of the country for coal, as well as for that other most essential commodity, lumber. For the handling of these two through this port facilities are being constantly increased and the amount of the shipments is being constantly augmented. The Norfolk & Western and Chesapeake & Ohio railroads have for a good many years brought their coal trains here to be discharged into ships, until the amount of their shipments has reached 4,500,000 tons annually, and now the Virginian Railway is preparing facilities for handling twice that amount in the same length of time. For handling coal in the most rapid and economical manner this last-named road is building a pier at Sewells Point that is thought to be an improvement upon any former effort in the

same direction. It is a combination of the lake and seacoast methods, with some features that are found in neither. The railroads that ship coal both to lake ports and seaboard have been compelled by different methods in handling at the different places to provide two kinds of coal cars. For the lake trade only the car of the gondola class is used, and for the seaboard nothing but the bottom-dump car. This is not only expensive and inconvenient to the railroads, but is also the source of constant annoyance to the coal operators, for the kind of car used must correspond to the demand at the destination of the coal, no matter what kind might be the easier to secure at the mine. When the car question came up for settlement by the Virginian Railway officials the general manager said there should be but one kind of coal car, and that the gondola, and so instructions were given the construction force to govern itself accordingly in putting up the piers.

The gondola car is unloaded by being placed on a dumper which turns it upside down, allowing the coal to fall into a chute, which carries it into the hatch of the vessel waiting at the side of the pier. When the proper amount of coal has been taken in at one hatch the vessel is moved so as to bring another hatch to the end of the chute. In loading seagoing vessels this plan is not feasible. Once the vessel is placed alongside the pier it stays there until the loading is completed. Therefore the point of loading must be moved from hatch to hatch. As now done, the railroad car is taken up on the pier, and, being a bottom-dump car, is run to the various chutes and its contents emptied therein. But as there are to be no bottom-dump cars on the Virginian road, that plan would not work on the new pier. The question then was how to construct a pier for loading seagoing vessels from cars such as are used on the lakes. The construction department got to work, and it is believed by those familiar with its plans that it has solved the problem and that the pier now under construction will be the best in the world for the purpose for which it is designed.

The pier will be 1000 feet long, 65 feet wide, 69 feet high at the outside end and 75 feet high at the inside end. The substructure is of concrete on piling, and the superstructure, 1045 feet between the bulkhead and pier head, of steel, with a fendering of creosoted piling and long-leaf yellow-pine lumber. The approaches from the shore are of timber. There will be two tracks on the pier from which to load vessels, one on either side, while a third track will drop down between the other two for carrying back the empty conveyor cars. From each side of the pier there will be 31 chutes, governed by link belts, by which they can be raised and lowered to a maximum of 30 feet above high tide and a minimum of 8 feet. Each of these chutes will swing in an arc of 25 feet, thus reaching hatches of differing heights and positions. Pockets of 60 tons capacity will extend along either side of the pier, connecting with the chutes. At the inside end of the pier will be the dumper, capable of taking up a 50-ton steel car loaded with coal and turning it bottom side upward every two minutes. Ten steel conveyor cars, built so as to withstand the constant hammering of coal dropped from a distance of 10 feet will be provided to catch the coal as it comes from the railroad cars. These conveyor cars will be of 60 tons capacity, so as to easily care for a 50-ton load. They will be provided with four swinging bottom doors, taking up the entire bottom space. These doors will be controlled by machinery and readily opened or shut.

The loaded railroad car will run from

the loaded car yard to the dumper by gravity, and after it has been caught up, turned upside down and emptied will be sent on to a kickback, whence it will go down a gravity track into the empty car yard. The conveyor car into which the coal has been dumped will be caught by a barney and taken to the top of the pier, and from there by electric power it will be taken to the chute where wanted. There the doors will be released, and, falling away, will allow the coal to be precipitated into the chute and thence into the hold of the waiting vessel. As soon as the conveyor car is emptied it is sent on toward the outside end of the pier, where it strikes a kickback and runs back down a gravity track to a point beyond the dumper, where it finds another kickback that sends it, still by gravity, to the dumper ready to be taken on for a repetition of the operation.

This method is followed until as much coal is put into the vessel as can be done without trimming. Then the coal will be emptied from the conveyor cars into the pockets, to be taken from them as fast as the trimmers can make use of it, while the conveyor cars go on to the next vessel and begin to load it in the same way. That is where the pocket system is expected to prove its worth. The time it takes a gang of trimmers to do their work would be lost to the gang at work on the pier but for the pockets in which coal is emptied for the trimming, but with these the work of unloading cars goes right along. Suppose four vessels of 3000 tons each were lying alongside the pier, two on each side. The conveyor cars begin to load one on each side and continue to pour in coal until 1000 tons has been put in each vessel. Then the trimmers take charge, and after filling the pockets adjacent to these two ships the conveyor cars begin to empty themselves into the holds of the other two vessels. They put 1000 tons into each of them, turn them over to the trimmers and go back to the first two and resume work on them. This plan is pursued until the cargoes of all are completed, and there has been no waste of time anywhere.

The conveyor cars are to be all of the same weight, so that the coal can be weighed on scales over which it will be run immediately after being dumped onto the conveyor.

It is expected that a 50-ton railroad car will be dumped every two minutes. This will give each conveyor car 20 minutes in which to make the circuit of the pier and return to the dumper ready to catch another load. Fifty tons every two minutes means 1500 tons an hour, or 15,000 tons in 10 hours, which is expected to be the capacity of the outfit. Thus in a year of 300 working days it would load 4,500,000 tons of coal, or by running two shifts could load 9,000,000 tons. The Virginian Railway, passing through a body of coal ample to furnish all it can carry, and having a grade so exceedingly low that locomotives can pull trains of almost unbelievable length, will undoubtedly soon become one of the leading coal-carrying roads of the country, and it will certainly not be many years before it will require the capacity of the pier to handle the output of the coal territory tapped by the road. The people of Norfolk confidently believe that the 4,500,000 tons now being handled here will be increased to 10,000,000 tons inside of three years.

In the matter of lumber shipments also Norfolk now holds a leading position, upon which she is constantly strengthening her hold. Last year the amount of lumber sawed or rehandled here reached the stupendous amount of 680,000,000 feet. One company that makes headquarters here sawed last year an average of 500,000 feet a day and made also 100,000 shingles daily. This concern owns in fee 600,000

acres of land and has bought the stumpage on 200,000 acres more. In spite of the great amount of timber now being taken from this land, so large is the boundary and so rapid the growth of the trees that it is actually growing more rapidly than it is being removed, and unless the work of cutting is enlarged the company will own more good timber at the end of a term of years than it had when it first bought the land.

Another concern has recently begun the manufacture of paving blocks from the red gum in which certain portions of this section abound. These blocks, creosoted, are claimed by some experts to make the best pavement yet invented. This excellence is said to attach to all the elements—first cost, durability and minimum of wear and tare of horses and vehicles.

Dozens of other lumber concerns are at work in this immediate section, making this their general shipping point as well as their financial and business headquarters, so that the lumber business is one of Norfolk's chief wealth producers.

GEO. BYRNE.

CHEERFUL BANKERS.

More Reflections of Prosperity in the South.

Since the publication in last week's MANUFACTURERS' RECORD of letters from Southern bankers bearing upon cotton-crop conditions and the financial outlook others have been received. Mr. R. S. Legate, cashier of the National Bank of Denison, Texas, writes:

"Viewing the proposition in its broadest sense or scope, my opinion has been that the Southern banks were able to finance the handling of the cotton crop of the present season without outside financial aid, which opinion, however, was based on the proposition that Eastern banking interests would furnish the money to cover drafts on cotton actually shipped for export after it had been purchased, paid for and concentrated in the cotton centers of the South, and that opinion, in my judgment, is in no wise impaired by the fact that the shipment of currency in payment of such drafts has been refused on account of the financial stringency in New York city, up to which time of refusal the crop was being moved to the points of concentration with Southern money furnished by its banking institutions, although the continued stringency in the East has made it necessary for our banks at the points indicated to decline to furnish further funds for the purpose until returns are received from the buyers' drafts on their European connections. The crop in this immediate section has been so very short that my opinion on the general disposition for or against holding back cotton must be understood to relate to local conditions only where the general tendency has been to sell, although there are quite a number of planters who believe in ultimate higher prices for which they are holding their product. Notwithstanding our short cotton crop, general business conditions in this section have seldom been more prosperous, due to the fact that the great majority of our planters put in large acreage in corn, from which they have realized from 45 to 60 cents per bushel, which crop has been one of the best ever raised in this section, and, in connection with other results from diversified farming, has been productive of a condition of prosperity which is reflected in all branches of business. The banks in this section are in a very prosperous condition, and have been in no wise affected by the stringency prevailing in the Eastern money markets."

Mr. E. C. Million, president McAlester Trust Co., McAlester, O. T., writes:

"The situation here is unique, inasmuch as the farmers here are compelled to hold

their cotton whether they wish to do so or not, owing to the inability of the cotton buyers to have their checks cashed. This is caused by the banks of St. Louis, Kansas City and others refusing to ship us currency as against our large balances there. This section of the country is in fine shape, our little city having established a clearing house and are taking care of their own interests as well as the interests of the small banks near here. The people are well satisfied, as well they might be, for all our institutions are sound and there is no uneasiness or hardship felt because of the peculiar situation existing. The South and West are more than able to take care of their own crops and needs, and all we would ask is that the East send us our balances as called for."

THE CITY ON THE JAMES.

Materialities of Wide-Awake and Stirring Richmond.

[Special Cor. Manufacturers' Record.]
Richmond, Va., October 30.

"The manufactured products of Richmond comprise 114 different articles, from Saratoga chips to locomotives. Her manufacturing plants number 1554, of greater or less magnitude." * * * "The whole giving employment to 33,613 of her citizens during 1906." In the words and figures foregoing is the history of Richmond's industrial strength tersely told by the writer of a handsome little book recently published by the municipal government for general distribution.

Nowhere in all the South did the iron hoof of war plow deeper scars; nowhere else did the brave Southern spirit set more readily to work to efface those scars. The capital of the South in the days of war's great tragedy, she determined to maintain her position in the time of the country's great peace. And so, almost before the echo of hostile cannon ceased reverberating from the surrounding hillsides, she set about recasting the engines of war into the implements of peace, catching step to the music of progress and prosperity as readily as she had done to the martial strains rolling from the war drums. And so on and still on she has pressed, gaining courage from every victory over opposing obstacles, gathering strength from every successive successful effort.

And the story of her accomplishment is written in the words quoted above.

Made by her geographical position a gateway of the South and Southwest as one travels from the North and Northeast, an entrepot of the North and Northeast on the journey from the South and Southwest, Richmond holds a position of natural strategic strength, and one which her enterprising men of business have used to their great advantage. The mighty steel arteries of commerce which we call railroads, the powerful veins of trade which we term waterways, the unrivaled creators of wealth and prosperity which we know as soil and climate—these have joined together to help this city on to prosperity and enable her to preserve her leadership unchallenged. And all these things her citizens have grasped and welded together and mightily welded for her upbuilding.

The manufacturing life of Richmond is represented by 250 principal plants and 1304 smaller ones, with a money investment of \$33,000,000 and products which amount annually to \$78,000,000. Most important in extent of capital invested, people employed and value of output are those engaged in the manufacture of the various forms of tobacco. More than 60,000,000 pounds of this staple is handled each year, the investment reaching \$6,500,000 and the annual return from the sale \$20,000,000. The employees in this line number 10,226. Next in importance, as measured by the same standard, come the

machine shops, foundries and agricultural-implement plants, which employ 7905 people; the printing, publishing, bookbinding, lithographing and allied employments, which work 1456 people; the lumber, sash, doors and blind makers, who employ 1528, and the woodenware works, which employ 1407. Other enterprises, less important only as measured by men and money engaged, are chemicals and cement, packers, curers and butchers, saddle and harness makers and workers in leather generally, flour, cornmeal, baking powder and flavorings, and these are followed, in turn, by a varied assortment of smaller concerns, each of which plays as important a part as any other, except in degree.

Among the most conspicuous of her manufacturing plants, because in some respects unique, and also because it is the largest of its kind in the world, is that of the Richmond Cedar Works. This concern manufactures buckets, tubs, ice-cream freezers, washing machines, butter trays, clothespins and other woodenware of ordinary domestic use in such quantity that it has no rival in the world in respect to amount of output. The wood used is for the most part cedar, which is brought from the Dismal Swamp, where the company owns a large body of land. Here it has its own railroads, penetrating the forests for miles, and employs a large force of men to cut the timber and deliver it to the central gathering points. The company also has its own steamers and barges, which are used in bringing the timber to its mills, of which it has several here and elsewhere. The plant here covers 12 acres and gives employment to 1300 men. This number is much enlarged by those employed in the swamp, on the boats and barges and at the other mills. A good many machines used in the making of the various articles manufactured have been invented by men employed by this company and patented by it, a fact which enables it to turn out its product at the lowest possible cost. The foundation of this great business was laid in 1809 in old Libby prison, and that historic building furnished shelter for it during a number of years. It has grown steadily through all the years since, practically under the same management, father being succeeded by son in ownership and control, and all imbued with the same enterprising and progressive spirit. The company has factories at Paint Rock and Greenville, Ala., where "pencil slats" are made for export; is interested in the Manchester Furniture Co., which among other things makes a great many washboards, and has mills and lumber yards at Norfolk.

The Richmond works of the American Locomotive Co. are among the large and important industrial enterprises of the South. Very shortly after the close of the war these works were established, and were carried on by Richmond capital and managed by Richmond men until a few years ago, when they were absorbed by the American Locomotive Co. The plant is a thoroughly up-to-date one, with all the latest and most approved machinery for turning out work at the least cost. It finishes an average of 32 locomotives a month, and has been known to make two a day on hurry-up orders. In addition to locomotives, it manufactures steam shovels, dredges and other machinery of a kindred nature. Twenty-five hundred men are employed.

The Tredegar Iron Works, established in 1836, are still engaged in demonstrating Richmond's worth as the location of manufacturing industries. These works make railroad supplies—car axles, car wheels, fish bars, angle bars, spikes and all kinds of articles made of iron and used about a railroad. From 800 to 1000 men are employed.

On famous old Belle Isle is located the Old Dominion Nail Works, another iron-working plant that has played an important part in the manufacturing life of the city. The Richmond Iron Works is just now moving into new quarters, larger, better equipped and more suitable in every way. This concern has been enlarging the scope of its operations recently, adding steel beams, among others, to the things it had heretofore turned out, and finding a good market for that and other kinds of structural iron in Richmond and the other rapidly-growing cities of the State.

In point of value of plants and of output the establishments that are engaged in manufacturing fertilizers stand next to those in iron and tobacco. The largest fertilizer company in the world is located here, and its great output is augmented by that of a number of others of lesser size. This city bears the distinction of being a large producer of blotting paper and of baking powder, and of being the home of a great publishing business and a factory that produces meat juices of world-wide renown. These few things are mentioned here simply as examples of what is being done in the manufacturing line, and as indicative of the value of Richmond as a manufacturing center.

In the matter of transportation the city is well provided for. Six railroads run into and through her confines, several of them throwing out their steel lines in as many as three different directions. They bring close to Richmond's doors of trade the great consuming centers of the East and the great producing fields of the West, and make her a clearing house for the trade of the one with the other. In addition to these artificial highways of commerce nature has provided the James river, navigable for boats of heavy tonnage from the Chesapeake bay to the wharves of Richmond, thus giving connection directly by boat with New York, Baltimore, Washington, and indirectly with every port wherein enters a seagoing vessel.

Nor is this all the James river has done, is doing, for this city. The falls in the river at this point furnish a water-power of great value, which has been taken advantage of for many years. The machinery at the Tredegar and other of the big plants has long been driven by this water, and of late years, since the day of electricity was ushered in, it has been further utilized in furnishing the motive power for the traction lines and many other factory plants, as well as the current for lighting the city. The company owning the power plant has developed on the Richmond side 13,000 horse-power, which is turned into electricity, while on the Manchester side a number of mills are run by the water-power direct.

But these advantages, natural and acquired, are not being relied upon by the active, energetic men of Richmond to retain for their city its position of eminence in a country that is growing so rapidly as the South. They regard them simply as aids to their own enterprise, genius and determination. The more they accomplish in the way of securing new industrial institutions the keener their appetite for more, and the more determinedly they set about the work of getting more. The consequence is that they are doing as much as the citizens of any other place in the country to keep their town before the eyes of prospective investors and factory builders. To this end several organizations have been formed and are at work, and the visitor finds the Chamber of Commerce, the Business Men's Club, the Retail Merchants' Association and the Travelers' Protective Association all vying with one another to point out the advantages of the city and bring men and money into its gates. These organizations are advertis-

ing Richmond to the world as she has never before been advertised, and their work is bringing results. In the last decade the banking power of the world increased 140 per cent., that of the country 219 per cent., while in Richmond it increased 232 per cent. During the same period Richmond's bank clearings increased 160 per cent. These are figures that show unmistakably rapid and wholesome growth in business and business' best resource—money.

Her banking institutions, consisting of 21 incorporated banks, are strong in substance and liberal in their treatment of well-managed and deserving business enterprises, so that there is never any trouble for industrial establishments on the score of banking facilities and accommodations.

One thing in which this city presents a particularly attractive and inviting attitude to prospective citizens is her clean and well-administered municipal government. The people here long ago recognized the fact that those who administer the government of a city are really but transacting the business of the public, and they have demanded and maintained the same honest, efficient methods in their public business that they have demanded and maintained in their private affairs. Therefore the city has been successfully governed from a business point of view, and in treating of its government the business men talk of it as they would of their private business, measuring its success, as they would measure the success of a private undertaking, in dollars and cents. They will tell you that the city owns the water-works, the gas works and other public utilities, and that its property is worth so much, which is \$5,280,000 more than its liabilities. In other words, it is a solvent, running concern that could cash up and go out of business with a good balance to its credit. Cities in which the better class of citizens do not take an active interest in public affairs cannot do this.

In every department of life the business men of Richmond are awake and stirring, and no city in the country seems to present a more alluring prospect to would-be citizens.

Geo. BYRNE.

\$300,000 for Road Construction.

One of the subjects which have been attracting the attention of Southern cities and counties during the last several years has been the construction of modern streets and roads. Some time ago Jefferson county, Texas, arranged to issue bonds to the extent of \$300,000 for road construction, and brief reference to the present status of the plan is of interest. The roads will probably be of shell, and specifications will call for both clam and oyster shell. All contractors will have an equal opportunity for bidding, and the shell will be obtainable from reefs in Government waters at Sabine Pass. Surveys are now being made, and bids on construction will probably be invited in December. There has been sold \$50,000 of the bonds, and proposals for the remaining \$250,000 will be opened next week. James F. Weed, offices at Beaumont, Texas, is engineer and superintendent of Jefferson county roads.

Great Thing for Alabama.

Mr. W. P. G. Harding, president of the First National Bank of Birmingham, in a telegram to the MANUFACTURERS' RECORD referring to the purchase of a controlling interest of the Tennessee Coal, Iron & Railroad Co. by the United States Steel Corporation, says:

"Think entry of Steel Corporation into Birmingham district marks beginning of new era in Alabama's industrial development, and that the resulting benefits therefrom will be incalculable."

NEW PORTLAND-CEMENT PLANT.

Works of Superior Company, Near Ironton, Ohio, a Model in Its Line.

[Special Cor. Manufacturers' Record.]

Charleston, W. Va., October 25.

A very strong company, of which Mr. Justus Collins of Charleston, W. Va., is president, has recently put into operation a new and remarkably well-appointed Portland-cement plant at a point 14 miles from Ironton, Ohio, on the Detroit, Toledo & Ironton Railroad. "Superior" is the name chosen for the company, and Superior is the name given to the railway sta-

even coal. The plant, constructed according to the best modern standards, has a stated capacity of 2400 barrels a day. It is equipped throughout with automatic labor-saving machinery, so that from the mines to the loading car the minimum of handling is required. One hundred and fifty men will do all the work, including plant operation, stone quarries and coal mines—fewer hands than are required in any 2400-barrel plant in the country, so it is claimed. The limestone, shale and coal are handled by trolley lines with a 12-ton Goodman electric motor from the quarries and mines, down grade, to the plant. The materials pass through the works by grav-

cars, which are switched into tracks on either side of the stockhouse.

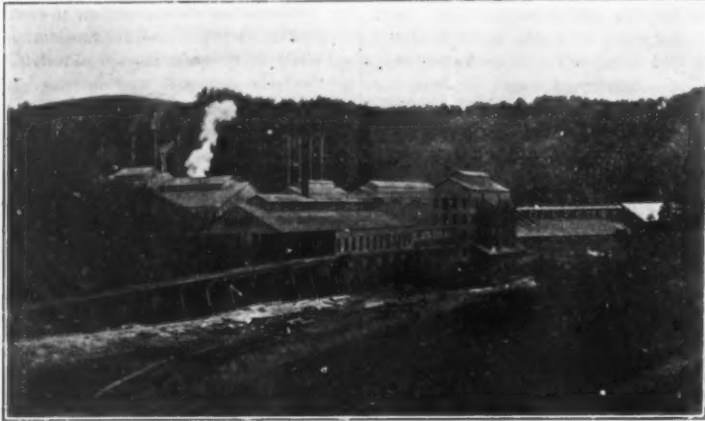
The power-house, equipped throughout by the Atlas Engine Works of Indianapolis, Ind., contains six batteries of water-tube boilers, 400 horse-power each, and two 700-horse-power rope-drive and two 400-horse-power each direct-connected Atlas engines. All the dryers, kilns, coolers and conveying machinery were furnished by W. F. Mosser & Son of Allentown, Pa. The Jeffrey Manufacturing Co. of Columbus, Ohio, furnished the elevating machinery. Fuller mills are used in pulverizing the coal. Other features of the plant consist of a well-equipped machine shop and a laboratory. The chief chemist is Mr. John Blank, formerly with the Lehigh company.

Ohio; Eugene Zimmerman, president of the Detroit, Toledo & Ironton Railroad, Detroit; B. H. Kroger, merchant and banker, of Cincinnati, Ohio, and Col. H. A. Marting, D. C. Davis, and Mrs. Nannie H. Kelley (now Wright) of Ironton, Ohio.

With a plant equipped for the most economical production, with materials which give a product of the highest grade and with river transportation as well as a rail outlet to all the markets of the country, the Superior Portland Cement Co. expects to command for itself from the very first a recognized position in the trade.

Reedy River Power Co.

Among the various water power-electric plants in course of construction in the South, and of which the MANUFACTURERS'

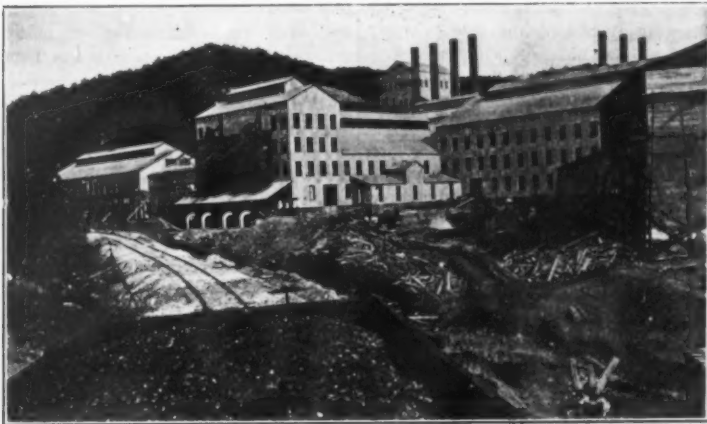


COALHOUSE—END OF KILNROOM AND STOCKHOUSE.

tion and postoffice town. Although an entirely new enterprise, the company has met with such conspicuous success in creating a market for its cement that 100,000 barrels were sold before a barrel had been produced. While a tribute to the managerial ability of the company, this result is attributed primarily to the fact that the investigations of men who know the cement trade convinced them that claims made by the officers and salesmen of the Superior Portland Cement Co. as to the quality of the cement were not unfounded. Strong as these claims were, they have been borne out by tests, and the more extended time tests are relied on to make even a still better showing. The orders that have been booked are from the Middle West and South. Arrangements have been

ity till the finished product lands in the stockhouse and is finally loaded on the cars by automatic trucks.

The buildings are of steel-frame construction excepting the stockhouse, 350x100 feet, which is reinforced concrete, and all the floors are of concrete. The American Bridge Co. of New York furnished the steel for the plant. The equipment consists of Mitchell cross-over dumps to No. 9 and No. 5 Gates crushers, and for the shale a No. 9 American clay dry pan. From these the limestone and shale are conveyed 150 feet to the circular bins, the limestone bin, 20 feet in diameter, and the shale 15 feet, and each 45 feet high. Automatic feeders convey the limestone to two limestone dryers and one shale dryer 5 feet in diameter and 60 feet in length.



GRINDING-ROOM—PART OF KILNROOM AND INCOMPLETED STOCKHOUSE.

made with representative dealers in the larger cities of Western Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Southern Michigan, Wisconsin, Kentucky, Virginia and the Southern States generally, and this important territory will be very thoroughly covered.

The Superior Portland Cement Co. is capitalized at \$525,000, all paid in. The company's holdings consist of 9000 acres of land, on which the plant is located, and which contain abundant supplies of all the materials required in the manufacture of Portland cement—lime, clay, shale, and

Passing then through three kominuters into six tube mills, both of F. L. Smidth construction, the materials are conveyed to the kiln bins. The kilns are 125 feet long and 7 feet 6 inches in diameter. The clinker is cooled in four Mosser vertical coolers, and after passing to the clinker mill goes through four Mosser pot crushers, then to 10 Griffin mills, and is finished by three F. L. Smidth tube mills, when the cement is automatically conveyed to the stockhouse. The Bates valve-bag system is used in filling the sacks, and automatic machinery finally loads the sacks on the



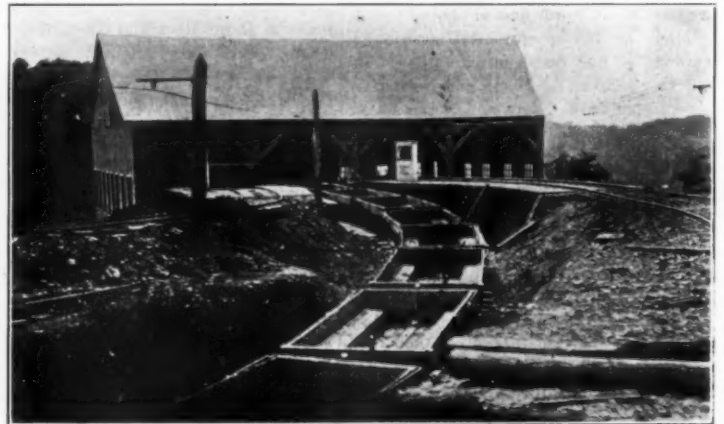
INTERIOR OF ENGINE-ROOM.

All the men connected with the conduct of the plant have had a successful experience in cement manufacture. The manager of the works, Mr. J. B. John, was for 12 years with the Lehigh Portland Cement Co. He designed the new plant throughout, and the machinery is all of his selection. John Greenall of Allentown, Pa., a recognized expert in his line, was consulting engineer during the construction of the plant, assisted by Eugene C. Switzer, formerly with the Newcastle (Pa.) Portland Cement Co.

The sales manager of the company is Mr. C. F. Harwood, recently of Pittsburg, where he demonstrated his ability to market cement. Messrs. James M. Hilands and Charles Schmutz, traveling salesmen, are well known to the trade, and have been altogether successful in their line.

RECORD has previously given particulars, is that of the Reedy River Power Co., N. B. Dial, president, Laurens, S. C. The company has the plant about half completed at present, and is generating 2000 horse-power, which is expected to be ready for transmission by February 1. This plant is located on Reedy river, 10 miles west of Laurens. The S. Morgan Smith Company of York, Pa., is furnishing the water-wheel machinery and the Crocker-Wheeler Company of Amper, N. J., the electrical equipment, while J. E. Sirrine of Greenville, S. C., is the engineer in charge. Messrs. C. R. Willard & Son of Spartanburg, S. C., are the contractors.

Data relating to the exhibition to be held in conjunction with the fourth annual convention of the National Associa-



CARS OF RAW MATERIAL.

The sales office will be at Charleston, W. Va. Mr. J. A. Lathim, Charleston, is secretary and treasurer.

The president of the company, Mr. Justus Collins, a native of Alabama, has had a remarkably successful career as a developer of coal properties in West Virginia. He was in the Pocahontas and New River districts, where he has been operating for nearly 20 years. Associated with him as principal stockholders in the cement company are Mr. M. L. Sternberger, vice-president, an extensive and well-known coal operator of Jackson,

tion of Cement Users have been published in pamphlet form for the benefit of those desiring to exhibit. Copies of these and any other information concerning the exhibition and convention, which will be held January 20-25 at Buffalo, can be had from Dai H. Lewis, manager of the convention, 760 Main street, Buffalo, N. Y.

The eleventh annual meeting of the Tennessee River Improvement Association will be held at Knoxville, Tenn., November 13. Mr. W. B. Royster of Chattanooga is the secretary of the association.

PETERSBURG INDUSTRIES.**The Virginia City Building Upon Manufacturing.**

[Special Cor. Manufacturers' Record.]

Petersburg, Va., November 1.

From the chaos of war this city emerged a little more than 40 years ago and immediately set about restoring her broken fortunes. The work of rehabilitation was undertaken quietly, but not the less determinedly, and has progressed unremittingly ever since. Ask the average man of any section about Petersburg, and he will tell you that it was the scene of some terrible fighting during the war between the States, but that he knows nothing else about it. Yet it is absolutely one of the most substantially prosperous towns in all the country. Its banks have a plethora of money, and each year adds its increment to the general store, for Petersburg is engaged in the kind of businesses that bring in net earnings every year. Recent estimates place the population of the city at 30,000, and the manufactured products each year amount to \$15,000,000, or an average of \$500 for each man, woman and child in the municipality. And that brings us right down to the meat of this story, which is manufacturing.

A recent publication of the Chamber of Commerce declares that "Petersburg is pre-eminently a manufacturing city," and gives as the most important lines of its manufacturing trunks and bags, tobacco, peanuts, flour and milling, cotton, silk, lumber and woodworking, iron foundries, candy, leather, fireworks, hats, baskets and crates, fertilizers, pants and overalls. In some of these things the city is a leader.

One of these prominent lines, though not one in which this city is pre-eminent, is peanuts. Six "peanut factories" are located here, making this the second or third peanut market in the world, and probably the first as regards the Spanish nut. The term "peanut factory" has a rather peculiar sound to the stranger, who is accustomed to the idea that peanuts grow from the ground. So they do, but they must be run through certain kinds of machinery and thoroughly cleansed and polished before they are ready for the market, and that is what the "factories" do. The crop handled by Petersburg last year sold for \$3,000,000, that amount of money coming in from other communities widely scattered over this and foreign countries, to be distributed among the factors and farmers, and by them deposited in the banks, paid out to the merchants and sent pulsing through the general arteries of trade. That is a large amount to come from so seeming-small a source.

Seven large mills are busily at work grinding corn and sending out the meal, which has given Petersburg a name country-wide in that line of production. This product is sold in many States, and is in high favor everywhere, both for the excellence in milling and the high grade of corn used. Last year the seven mills produced 1,007,000 bushels of meal. This makes a good market for corn, much of which, of the quality most popular for making meal, is produced by the farmers of the surrounding agricultural districts.

There are five large cotton mills here, with 1000 looms and 55,000 spindles. They make sheetings, ducks, threads and yarns, much of which is exported. The output last year was 11,000,000 yards of cloth and 100,000 pounds each of threads and yarns. Ten thousand bales of cotton were consumed.

In all lines of the tobacco trade Petersburg occupies a high place, and in the manufacture of plug tobacco for export a first place. Last year her factories exported 8,000,000 pounds of plug, which is 80 per cent. of the entire quantity ex-

ported. In addition to the export business, the city has a great domestic trade in plug as well as in other forms of tobacco and in cigars and cigarettes, both of which are made in great quantities by large factories located here.

The business, however, in which Petersburg stands pre-eminent is the manufacture of trunks, bags and suitcases. Of these factories there are five, and one of them is the largest in point of output in the world. This is the plant of the Seward Trunk & Bag Co., and its output is 1000 trunks and 5000 bags, suitcases and telescopes daily. The business was started in 1880 by Mr. Simon Seward, a native of an adjoining county, who had resided in Petersburg most of his life. He began with a capital of \$10,000, which was increased to \$50,000 in 1895, when the business was incorporated. The latter sum, however, does not approach the amount which the business now represents. Indeed, in either leather, lumber or metal materials used in making the articles manufactured the company carries stock far beyond the amount of its nominal capital. A tour through the buildings of this company, covering many acres of ground, discloses many interesting things and leaves with the tourist the one idea, more deeply impressed than any other, that the success of the concern is the result of a superb faculty of systematizing work. Mr. Seward began the business without experience in that special line, and by organizing ability of the first order, coupled with a broad and liberal business policy, made it a success from the first. Every piece of labor-saving machinery invented and put on the market which is adaptable to his work he has bought and installed, taking immediate advantage of its economy. The force of workmen employed are trained to do one thing, and do it well, and through all departments the work passes from hand to hand, each adding to it the particular stroke assigned as his share, and the result is that everything moves along with the smoothness and evenness of a perfectly accurate machine. The company has its own veneer mills, where the veneers used in trunks of high grade are made, and in its lumber yards from 2,000,000 to 3,000,000 feet of lumber, sawed to the proper dimensions, stands "on the sticks" seasoning against the day of use. For the convenience of the company in shipping railroad sidings were long ago built to the back door of the shipping department, while for their own convenience the railroads long ago added a new feature not met with elsewhere in my experience—their own freight offices, where a shipping clerk in their employ receives and weighs freight and signs bills of lading. The company has agencies in New York, Boston, Philadelphia, Baltimore and Washington, and has also a large export trade. Mr. Simon Seward, the founder of the business, is president, and still gives it his active supervision, while four sons, after completing their college courses, have come into it to take charge of the various departments. Of these the elder, J. W. Seward, is secretary; Harvey Seward is superintendent of the trunk department; Percy Seward is superintendent of the bag department, and Hatcher Seward is treasurer and has charge of the books. The devotion of these young men to this great business is an earnest of the manner in which it will be conducted when the father finally turns it over entirely to them. About 1000 persons are employed in this factory, and the payroll is \$375,000 a year.

Four other trunk and bag factories are located here, each of which turns out a large and valuable product annually, and each of which is worthy special notice. The Seward plant was chosen as the exponent of the business because of its un-

challenged leadership in the matter of volume of output.

Petersburg stands at the head of navigation of the Appomattox river, a fact that is of much importance in her commercial life, and is destined to be of more. The United States Government, which had long been flirting with the project, has at last undertaken to deepen the harbor and to cut out the channel from here to the mouth of the river to a minimum depth of 16 feet. This lacks but two feet of equaling the depth of the James river, beyond which it is not necessary to go in making the channel of the Appomattox, for as this river empties into the James, all important points visited by steamers plying in the Appomattox must be reached through the waters of the James. It is hoped, however, that Congress will increase the appropriation sufficiently to make the channel in the Appomattox equal to that in the James, so that the craft may come from the latter into the former carrying full cargoes. When the plan for deepening the channel of the James is undertaken every effort will be made to include the Appomattox in the work, so that this city will be kept abreast with the best in the matter of water transportation.

The Appomattox river is to be of prime importance to this city in another respect. Within a few miles above the city are falls in the river, forming a great natural water-power. Recently a company headed by Frank Jay Gould of New York has secured the falls property and is carrying out a scheme for installing dynamos driven by water and furnishing power to the various plants in this city for whatever purpose desired. A great dam is being built and a big canal constructed from it to the location of the power plant. Here the water will have a fall of 70 feet, and dynamos will be installed to transform into electricity of 15,000 horse-power. The dam and canal are well under way, and the machinery will be installed as rapidly as possible. Petersburg is promised cheap power for all kinds of manufacturing projects, and plenty of it. What cannot be utilized here will be carried to neighboring cities.

Surrounding this city are lands highly valuable for trucking, and the city is destined to reap a large revenue from that business in the not distant future. The attention of small farmers and truckers in other parts of the country, where the soil and seasons are not so well adapted to that kind of farming, is being directed to these lands, with the result that there is now a great deal of inquiry for them, and some purchases have been made. The Norfolk & Western Railway has done considerable work along the line of directing attention to these possibilities, and has done some colonizing of farmers in this section. It has also established an experimental farm a few miles east of this place, with the view to be able to show exactly what can be done in the way of agriculture. The colonists have found their lands valuable and their work profitable, while the experiments carried on at the experimental farm have demonstrated the truth of every claim made by the agents of the railroad for the lands along its line. It is expected that the number of people brought to these lands will be much larger this year than formerly, and that the truck business will rapidly increase throughout the Petersburg section.

The Petersburg Chamber of Commerce, organized on an excellent basis, is doing a lot of good work. When it set out to advertise the city's advantages the first step taken was the employment of an advertising man. Him they found in the advertising department of a big daily newspaper in the person of Mr. Edwin L.

Quarles, a particularly bright and active young man of strictly modern ideas and great energy. He is busy day and night scheming for the upbuilding of the city, and his work has resulted in bringing the advantages which Petersburg has to offer to the attention of a great many people. And back of him stands as loyal a lot of business men as ever labored for the public good, ready to help in any direction he may show them to be proper. Already there is, as an adjunct to the Chamber of Commerce, an Investment Corporation, in which each member holds \$1000 worth of stock, thus creating a fund for use in assisting in any reasonable way any manufacturing industry that wishes to locate here, and which is able to prove its worth in a satisfactory manner.

The next 12 months will witness an active campaign for the upbuilding of Petersburg, and their latter end will find the city much farther along the road of progress than now. For natural advantages, backed by money and enterprise, will build cities. GEO. BYRNE.

CEMENT INDUSTRY IN 1906.

One of the most interesting features of a report on the cement industry in the United States in 1906, prepared under the direction of Mr. Edwin C. Eckel for the United States Geological Survey, is a diagram comparing the curves of increases in pig-iron production and in Portland-cement manufacture. These curves show that while the pig-iron output has, with some declines, increased from about 9,000,000 tons of 2240 pounds in 1890 to 26,000,000 tons in 1906, an increase of nearly 212 per cent., the production of Portland cement has increased in the same period from practically nothing to nearly 46,000,000 barrels of 380 pounds. On this point Mr. Eckel says:

"The cement curve rises steadily at an increasing ratio each year, showing no downward flexures or relapses. This is the normal form for the growth curve of a young and rapidly-expanding industry. The iron curve, on the other hand, though showing a decided gain for the period covered, also shows at intervals depression flexures, typical of a mature industry, whose annual output must now depend on the general financial and industrial condition of the country. The cement output as yet has not suffered markedly from financial depressions. Prices have fallen off in poor years, it is true, but the annual output has always increased. The rise in yearly output from 1885 to 1906 has not only been continuous, but has even shown a tendency to increase its rate of increase. Of course, such a condition of the industry cannot be expected to continue indefinitely. Within a few years we may expect to see the rate of increase lowered, and finally in some period of business depression some year will show a lower output than the preceding year. This will mark the end of the youth of the cement industry and the beginning of its period of maturity. Though the present condition of the industry is as prosperous as might be desired, it is entirely possible that the change in rate of growth may be near at hand. The new construction of 1906 and plants to be built in 1907 will provide a great increase in mill capacity. If the succeeding years are generally good this increase will be taken up without difficulty, but a general financial depression in 1908 would probably result in a temporary and perhaps a severe check to the cement industry. So far as can be estimated now, the plants which will be in operation before the end of 1907 will turn out cement at the rate of over 55,000,000 barrels per annum, and it is doubtful whether such an output could be absorbed if the busi-

ness affairs of the United States were not in a generally prosperous condition."

While the production of Portland cement increased between 1904 and 1906 from 26,505,881 barrels to 46,463,424 barrels in the whole country, the production in Alabama, Georgia, West Virginia and Virginia increased from 864,093 barrels to 1,172,041. In the review of the industry in 1906 Mr. L. L. Kimball has the following to say of individual Southern States:

"Georgia.—Better prices, a greatly-increased output and a successful season formed the record in 1906 for the Portland-cement plant in Georgia. The company owning this factory made practically the same record in 1905, when it generally increased its production over that of the preceding year. The output reported each year since the opening of the mill has shown an advance over that for the preceding year.

"Kentucky.—Only one plant was actively engaged in the production of Portland cement in Kentucky in 1906, and it made a remarkably good showing for its second output. There was no cause for idle mills, and the plant was active all the year, using its four rotaries constantly. A new plant is now under construction at Stanton, in this State, which will have its main offices in Lexington. It will not become active before the fall of 1907. The property of this company is nearly 1000 acres in extent. The fuel for supplying light and power is to be natural gas, of which there is an abundant supply. Transportation facilities are excellent.

"Tennessee.—This State, which has not figured in the reports of this office on the production of cement since 1890, is about to become again a producer of Portland cement. Late in 1906 the erection of a plant was begun by a company having large interests in cement production in Kansas, and it expects to begin operating the new plant within a year from the time building was commenced. There will be 10 rotary kilns installed, each 110 feet in length by 8 feet in diameter, with about 4000 horse-power of steam engines and boilers. In the vicinity of the plant, which is located near Copenhagen, there is an abundance of coal, and this will be the fuel used.

"Texas.—In 1906 two plants in Texas were producing Portland cement. One of these manufactures a well-known brand of natural cement as well as Portland, while the other is engaged exclusively in making Portland cement. The first plant reported a production of Portland cement which was very slightly less than its output for the preceding year. The second plant reported a large output, nearly double that for 1905, and many times greater than the Portland production of the other factory. This is only the second output reported from this plant since its remodeling. It ran on full time throughout the year, and had only a few thousand barrels of cement in stock when the year closed.

"Virginia.—In Virginia there is only one Portland cement-producing plant, and that one is entirely successful. Its customary yearly increase in production was marked in 1906, and the mills were active throughout the entire year except on several holidays. The company is now installing three additional kilns 125 feet long, and the grinding machinery necessary to keep them active. When the alterations are completed the factory will be capable of producing 1,000,000 barrels of Portland cement a year. The plant projected in this State by a cement company now active in Pennsylvania has not yet been carried far enough to permit building operations.

"West Virginia.—At the only active Portland-cement mill in West Virginia in 1906 the reported production decreased by

reason of idleness during the installation of new machinery and additional kilns to increase capacity. The enlarged factory will have an output for next year much in advance of that for previous years if nothing unforeseen occurs. Two other plants which were located in this State have been discontinued. One has failed to produce any cement for several years, and the other was never wholly completed."

Drainage in North Carolina.

[Special Cor. Manufacturers' Record.]
Norfolk, Va., October 26.

The question of reclaiming swamp lands by drainage, now being discussed throughout a very wide scope of country, is receiving special attention in the section lying in North Carolina beginning immediately south of the Dismal Swamp, and is being thoroughly urged upon the attention of the people of that section by the Norfolk & Southern Railway. Already a good deal of acreage has been reclaimed by private enterprise in Southeast Virginia and Northeast North Carolina, and in at least one county in the latter State a county tax is provided for carrying on the work.

These swamp lands are of unsurpassed fertility, and capable of great production for a long period without fertilizing. The waste of the ages has laid down a soil deep and rich and strong, and the lands already drained are selling at prices which a few years ago would have seemed fabulous. They are not only good for trucking, potato-growing and the producing of crops generally held to be peculiarly Southern, but have proven to be unexcelled for corn and like crops in which the West has hitherto surpassed.

At Belhaven, in Beaufort county, North Carolina, a very large area is being drained by Mr. J. A. Wilkinson. This, while a private enterprise, is the largest yet undertaken in either Virginia or North Carolina, and is being watched with great interest by many other landowners in that general section. Newly-devised and manufactured machinery is being used in the work, which is being pushed with surprising rapidity. Belhaven is the terminus of one branch of the Norfolk & Southern Railroad, which is lending all the aid and encouragement possible to the enterprise.

GEO. BYRNE.

Hamlet, N. C.

[Special Cor. Manufacturers' Record.]
Hamlet, N. C., October 28.

Hamlet, N. C., is a town of approximately 2000 people, and is the layover station for the men of the second division of the Seaboard Air Line Railway. It is comparatively a new place. The business of the place is varied. There are two fine lumbering plants located here. One of them is one of the largest finishing plants in this section. It represents an outlay of about \$25,000. The other is a branch of the Apex Lumber Co. of Apex, and does a large and thriving business.

The Bank of Hamlet is the money institution of the place, and there is a \$75,000 deposit account in it.

We have an ice plant here with a capacity of 65 tons per day, and this cannot meet the demands, and hence will be enlarged for the next season.

One of the largest cotton compresses in the South is located here and compresses several thousands of bales of the staple per annum.

In the mercantile arena we have two furniture stores, two drug stores and about 18 grocery and general merchandise establishments.

There are three churches here, two of which have been completed within the past 12 months, and the fourth is to be erected at an early date.

The great need of the place is manufacturing enterprises. There are many ex-

cellent sites for such enterprises near here and in the place which can be had cheap. One of the best sites for a bleachery in this whole section is located here. Men who wish to invest in manufacturing of any kind would do well to investigate the opportunities that this place affords.

Bonds for Waterway Improvement.

Editor Manufacturers' Record:

Every mile of our 43,000 miles of waterways not yet improved needs speedy improvement. Canals are needed, including the one from Macon to the Tennessee river, to connect our waterways and make them a harmonious and complete transportation system. Large expenditure is needed as rapidly as it can wisely be expended. Our Government, as compared with France and other countries, has so far been parsimonious, expending upon its 43,000 miles of waterways less than one-third as much as France has expended upon her less than 8000 miles. The necessity being urgent, it is to be feared direct appropriations will not be made adequate to the emergency. The Government is reclaiming land by irrigation. It gets its money back by renting water. It is expending vast sums at Panama. It will get its pay back by a tax on tonnage. The Erie Canal between 1825 and 1882, when it was made a free canal, paid all costs of operation, maintenance, construction, all interest, reduced all canal and rail rates greatly and turned a surplus of \$29,000,000 into the State treasury. Why should we not bond for enough to complete all improvements of waterways, the construction of all canals national in character, providing for a toll on tonnage sufficient to pay all costs of operation and maintenance, all interest and provide a sinking fund to pay the principal outlay in a period of years, then making these waterways free? The vice of our insufficient and uncertain appropriations is that they unnecessarily delay completion of meritorious works and make them cost far more by deterioration of many kinds than if completed as quickly as possible.

C. P. GOODYEAR.

Brunswick, Ga.

Rio Janeiro's Improvements.

In a summary of the great improvements that have recently been made at Rio de Janeiro, Consul-General G. E. Anderson traces them to the determination in 1903 to increase port facilities of the Brazilian city. Two foreign loans amounting to \$36,000,000 were raised in London for this purpose, and the plan of the improved docks with enough water to carry the largest ships coming into the harbor developed the advisability of reconstructing many of the streets along the water-front. This was followed by plans for the coincidental embellishment of the city at a cost of \$12,000,000. These plans included an avenue along the entire water-front of the city, which is in a series of semi-circles of from half a mile to a mile in diameter. To build this boulevard a straight line was drawn across the city, passing through its business portion, and it was built, no matter what was in the way and no matter whose property was involved. There were 390 buildings destroyed in the building of this avenue, and a small mountain was removed and a large portion of the bay was filled in to round-out the great plan of driveways. In the improved district there are 15 miles of asphalt avenues, miles and miles of stone curbing and stone pavements, and improved sewerage and water service. Under a well-defined scheme of general embellishment owners of property along the great boulevard have been allowed to construct buildings only on design approved by the municipal government. On this avenue are a number of

public buildings, including a municipal theater which has already cost \$2,630,640, and it is not yet completed.

Paving to Cost \$225,000.

One of the marked features of industrial development and the establishment of cities in the Southwest has been the progress which the Oklahoma municipalities have made. Oklahoma City has been especially progressive, and is about to undertake an improvement which is worthy of especial mention. This improvement will involve the paving of 49 city blocks of streets, necessitating the laying of 75,000 square yards of asphalt, with gutters and trimmings. About \$225,000 will be the cost, and the R. F. Conway Company of Chicago has received the contract. It may also be pertinently added that on November 11 the city officials will open proposals for paving 16 blocks of streets.

Change of Schedule.

The Chesapeake Steamship Co. has changed its schedule so that its steamers will leave Baltimore at 7 P. M. daily instead of 6.30 P. M., thus giving passengers a longer time in the city for business or pleasure, and at the same time permitting them to reach Old Point Comfort and Norfolk at a reasonable time in the morning. E. J. Chism is general passenger agent of the company at Baltimore.

Location for Woodworking Plants.

It is stated that the presence of raw materials, labor and water-power at Clarksville, Ga., makes it desirable for manufacturers to consider the location of woodworking plants in that city. Information regarding the advantages can be obtained by addressing the Board of Trade.

One of the most suggestive and should be productive publications that has been issued in the interest of immigration to the South is a booklet of 100 pages, "Virginia an Ideal Home for All," circulated by Mr. F. H. LaBaume of Roanoke, Va., agricultural and industrial agent of the Norfolk & Western Railway. If one wants facts about the cities along the route of the railroad or is seeking for a farm home he will find the booklet of practical value.

Referring to the general progress of the city of Tulsa, I. T., E. Covey, secretary of the Commercial Club, says: "Tulsa is building four miles of street railroad, paving 80 blocks with asphalt, erecting five-story office building of reinforced concrete, modern M. E. church to cost \$35,000, First Baptist Church to cost \$15,000, school to cost \$25,000, 25 business houses and 200 dwellings."

The Greenville (S. C.) Board of Trade has elected Messrs. F. F. Capers, president; P. T. Hayne and J. B. Bruce, vice-presidents; A. G. Ferman, treasurer. Messrs. D. C. Durham, Walter West, W. C. Becham, J. D. Woodside, A. A. Bristow and E. A. Smythe, whose terms have expired, have been re-elected directors.

The Board of Trade of Lake Charles, La., has elected Messrs. N. R. Swift, president; C. A. McCoyal, J. Y. Allison and O. A. Thrower, vice-presidents; Leon Locke, secretary, and N. E. North, treasurer.

The names, addresses and occupations of nearly 6000 white male citizens of Pittsylvania county, Virginia, have been compiled and published in pamphlet form by E. H. Shelton, Chatham, Va.

Five wooden box manufacturing plants of Nashville, Tenn., with an aggregate capital of more than \$250,000, are turning out annually \$600,000 worth of wooden boxes.

CURRENT EVENTS AS VIEWED BY OTHERS

THE FOREST INDUSTRY.

[American Machinist.]

The movement toward forest cultivation which is beginning to receive so much attention lends interest to any information on that subject which comes from Europe, where systematic forestry has long been practiced. In Germany forestry is largely a Government enterprise, and we learn by a report by Consul Teichman of Eibenstein that the industry is handsomely profitable. About 50,000 square miles of German soil, representing about one-fourth of Germany, have been adapted to foresting, while in Saxony alone over 443,000 acres are covered by Government forests, the Government and private forests of Saxony together aggregating almost one-half of the kingdom. The treasury of Saxony places the Government forests as its highest revenue producer after the State railways—the revenue from the forests, with this exception, exceeding the income from all other sources, taxation included.

Along with this in Saxony the cultivation of forests has been followed by a remarkable development of industries using wood as a raw material. The leading tree cultivated is the red pitch pine, which has been found to be the most profitable wood for cultivation under the climatic conditions of Saxony. About 4000 manufacturing interests, employing 60,000 people, have been created in connection with the Saxony forests.

The climatic influences of forests have been extensively investigated in Germany, and, contrary to the general impression, they have been found to be small. The only fact established by these investigations has been that the temperature of the atmosphere under the trees in summer averages from 1 degree to 3 degrees Centigrade (2 degrees to 6 degrees Fahrenheit) less than in the air outside of the woods. During winter time it is the same for both, and the mean for the entire year shows only 0.7 degree to 0.8 degree Centigrade less for forest temperature than outside. The temperature of the forest soil was found to be from 1 degree to 3 degrees Centigrade lower during the entire year. The evaporation of free water surface in the woods was calculated to be 50 to 60 per cent. less than on non-forested soil. These are the only substantial facts thus far ascertained by these scientific researches, so far as climatic effects are concerned.

The hygienic value of forests is unquestioned in Germany, their richness in ozone and dust-free character being highly beneficial to health; hence their cultivation in the neighborhood of cities.

GAS FOR POWER.

[Boston Herald.]

A few months ago a party of American investigators returned to this country from Europe, bringing detailed accounts of industrial progress abroad which made it appear that in some lines this country has hardly been keeping pace with Germany and other nations. The development of gas engines in particular was said to be considerably more advanced abroad than with us. But this advantage was "more apparent than real," and it is plain that the estimates of advance in this country did not embrace certain large plans about to be started. Gas engines of 3000 horsepower are by no means unknown in this country, though no doubt more of them are in use in Germany and elsewhere than here. Let not this great country grow im-

patient. Gas as fuel for immense industrial plants is rapidly coming into use. The Indiana Steel Co. in constructing its enormous plant at Gary, Ind., will spend something like \$75,000,000. No less than 6000 men are now upon the work. The power plant which is to be installed there will use 100,000 horse-power, and artificial gas is to take the place of steam for driving all the machinery. The fact that the gas-engine business in this country is well established only implies a full realization of its coming growth. As the use of electricity for lighting and power purposes increases gas is in constantly greater demand for fuel supply, for warmth and for motive power.

THE FARMER WHO THRIVES.

[Secretary of Agriculture Wilson.]

With the help of improved machinery the progressive individual farmer is producing much more than the average farmer did a generation ago, and men of this class are keeping up the productive qualities of their farms. They observe certain principles of farm management; they do not sell fodders or roughage; they keep livestock and grow feed for them; they sell animals and their products, fruits vegetables, etc. As long as the pioneer on virgin soils grows wheat at prices that have been current the progressive farmer grows little or none. He keeps improved stock that respond to their keeping and that put on the greatest per cent. of meat on the prime parts. He puts all manure promptly on the fields.

He rotates his crops.

He tile-drains his lands.

He keeps up good fences.

He has good pastures.

He has a good garden.

He breeds draft horses and does farm work with brood mares and growing colts.

He has a library with periodicals and standard works, and a musical instrument.

He helps his wife in the house when she needs it, has a spring vehicle for her to visit in and drives her to church himself.

He keeps dairy cows or mutton sheep, or both.

THE SOUTH'S INSPIRATION.

[Asheville (N. C.) Citizen.]

It is an easy matter for an individual or individuals to sit down and outline courses of action which should lead to the greater glory and prosperity of the Southland, but theories have never been known to accomplish tangible results. Preaching is a good vehicle, but you have got to get down to hard practice if you would arrive at the goal. It is this conviction which prompts the MANUFACTURERS' RECORD, that tireless friend of the Southland, to spend enormous sums of money in an effort to ascertain how and why other sections advance materially. The MANUFACTURERS' RECORD has always maintained that the South has resources unequalled by any other section in the world, yet it feels that we have not as yet made the most of our opportunities. How true this is we will not attempt to say, but we do know that we have not as yet attained anything like our full development. The South is still young. In all truth it may be said to be only 45 years old, because when the nation emerged from chaos and suffering it had to begin life anew. There was nothing material to start with. There were no willing friends to lend a helping hand, and what Dixie is today she made herself. So we must advance, keeping time to the pace which was set in the dark days. We must not imagine for a moment

that we have accomplished all that is necessary; we must keep working without a let-up. "If it be desirable," says the MANUFACTURERS' RECORD, "that we should be able to see ourselves as others see us, in order that we may see our own shortcomings, it is equally desirable that we should be able to see others, and, measuring ourselves alongside of them, see wherein we fall short, either individually or as a community, of meeting the responsibilities which our opportunities give us, as compared with what they have accomplished.

"The South, comprehending something of its own natural resources, impressed as it is with what has been done in material upbuilding, believing that it is doing more than any other section, is too prone to be satisfied with its accomplishments. It is true that the South has done great things. It is true that its people have marvelously wrought in material advancement. But it is worth while studying what other people have accomplished that we may see whether the South, with its unequalled natural advantages, has done as much as other sections with fewer advantages. Nature has so crowded this section with resources and opportunities for the creation of wealth that we could not have stopped material upbuilding if we had desired. But have we done all that has been in our power as compared with what other sections are doing, is a question which it behooves the whole South to ask itself."

NEW ENGLAND'S FUEL.

[Boston Transcript.]

The only ships really fit to bring from the coal ports to New England the enormous quantities of coal yearly required to heat our houses and drive our manufacturing are either new steel steamships, full-powered and built to meet our rough seas and wintry gales, or sail vessels of the fore-and-aft type of large tonnage. These latter craft are handicapped alike by the light winds of summer and the fierce storms of winter, and are not destined to increase. It is to the steamship, designed and built to carry cargoes safely and at low cost, that New England must look in the future for the efficient transportation of its vast fuel supply and some lessening of its enormous coal bills.

Closely allied with this question of a new and more wholesome and efficient coastwise carrier is the question of loading and unloading facilities. Here, as well as in the use of barges, obsolete elsewhere, the North Atlantic coal trade is a generation behind modern scientific practice. One reason why these cheap and yet extravagant barges have been retained is that both the loading and the unloading of colliers takes so long a time. They order these things better on the Great Lakes in a commerce absolutely dominated by Americans. There great steel steamships, far larger than our coastwise cargo ships, are filled in a few hours and discharged in a few hours more. The docks of Duluth or Conneaut or Cleveland are to the docks at Norfolk or Boston as is the twentieth century to the first half of the nineteenth.

A great reward awaits those investors who have the sagacity and the courage to modernize the coal-carrying business of New England. Fortunately a beginning has already been made. There are 20 New England ports that need to be fitted out with decent coal-handling appliances, and several hundred ramshackle barges that ought to be sent to the junk heap before they and their crews are claimed by Day

Jones. This is a process of renovation that is sure to come in any event, but it might profitably be hastened by a congressional enactment that no ocean tug shall come up around Cape Cod with more than two barges between May and October, or more than one during the rest of the year.

DURABILITY OF CONCRETE.

[Engineering-Contracting.]

We consider that one of the most important advantages that concrete has over all its competitors among structural materials is its greater durability and freedom from repairs. It is well known to engineers and architects that the mortar in the joints of cut-stone masonry soon crumbles away. This has been attributed by various authorities to many causes, such as poor cement, insufficient amount of cement in the mortar, the attack of acids in the air and the bursting action of water freezing in the pores of the mortar. None of these causes offer a satisfactory explanation of the universal failure of mortar in cut-stone masonry. It can be and has been mathematically proved that the pressure due to the expansion of the stone when heated in the sun is the most common cause of the destruction of mortar in cut-stone masonry laid in regular courses. Stone expands under heat as much as does steel, and with tremendous force. It is well known to everyone that steel rails expand and contract with changes of temperature, but it is not so well known that a line of stone blocks as long as a steel rail behaves in precisely the same manner. Since concrete is not made up of continuous lines of stones of equal thickness, but is a heterogeneous mixture, there is no chance for the heat expansion to shear the stone loose from the mortar.

Thus far we have spoken only of the failure of the mortar in the joints of cut-stone masonry. How about the stones themselves? We know that stone from certain quarries soon splits and crumbles, and that, in fact, even granite tombstones are eaten away in time. Many engineers have feared that concrete would be even less durable, but this fear has gradually disappeared, except on one of the large Eastern railways, where stone masonry is still used in preference to concrete because of its supposed durability.

The reason that concrete is durable is simply this: the stone forming the ballast in concrete is surrounded on every side with cement; it is buried in cement. The cement not only protects the stone from the attacks of acids in the air, but it envelops and strengthens the stone so that it cannot splinter and crack under changes of temperature. Insects of all kinds are found buried in amber and in a perfect state of preservation thousands of years after their death. In like manner fragments of stone buried in cement will remain intact for ages. Not only will they do so, but they have done so; for concrete built by the Romans, before the Christian Era, is found in good state of preservation, although Roman cement was inferior to our Portland cement. All this leads us to the following important conclusions: Stone so poor that it would quickly go to pieces if used as stone masonry will last forever if used as the ballast of concrete.

Not only may we safely use in concrete stone of inferior durability, but we may use stone that has no planes of cleavage, or stone that is badly seamed and jointed. Stone suitable for cut-stone masonry is a comparatively rare article when we consider the vast area of our country and the small area of the good cut-stone quarries

in it. Stone so gnarled and jointed that it breaks out in small irregular pieces, like many of our trap rocks, is unfit for cut-stone masonry and it makes poor rubble masonry; but such stone is eminently fit for concrete. The very fact that it breaks out in small pieces reduces both the cost of quarrying and of crushing it.

A HOUSE WHILE YOU WAIT.

[Richmond (Va.) *Times-Dispatch*.]

Thomas A. Edison now proposes to bestow another benefit upon the world in which he lives by showing mankind how to build a three-story house in 12 hours at a cost of \$1000. Mr. Edison's house will consist of concrete, and will be cast from iron molds in one solid piece, including stairs and bathtub. It will be fireproof and indestructible, and from one set of molds an infinite number of exactly identical houses can be made.

This will not be at the expense of art, for the inventor declares that there is no reason why a concrete house shouldn't be as pretty as any other kind.

The plan is simple enough as he describes it. "After the cellar is dug," says he, "the contractor will bring his sand, cement and crushed stone, together with his concrete-mixing machinery, the molds and a derrick, to the spot. As fast as the concrete is made it is poured into the molds, which fit together from cellar bottom to roof tree. The workmen keep on pouring in the concrete until it overflows at the top. Then they go away, and six days later they go back and take off the molds, piece by piece."

This sounds like an abstract proposition, but if Mr. Edison is right it will be concrete in the finish.

PEANUT OIL.

[Daily Consular Reports.]

Consul D. I. Murphy makes the following report from Bordeaux on the French peanut-oil industry for the furtherance of that line of manufacture in the United States: "In a recent article in a Western newspaper on the growing of peanuts it was stated that the annual value of the peanut crop in Virginia, South Carolina and Tennessee was between \$8,000,000 and \$10,000,000. How correct this statement may be I have no means of determining, but it gave me the idea that a very profitable industry might be established in the manufacture of arachide oil, if such an industry is not already in existence in the States mentioned.

"Arachide oil, when well clarified and fresh, is preferred to the best olive oil for table use by many people in this part of France. In Bordeaux the sales of arachide exceed that of all other oils; in fact, they are almost as large as the sales of all others combined. Over 50,000 tons of peanuts are brought to this port every year from the French possessions in Africa, the average annual value of the peanut (or arachide) oil manufactured in this city being over \$2,000,000.

"Not only is arachide a most excellent table oil, palatable, nutritious and healthful, and very much cheaper than olive oil, but it is employed almost exclusively in the manufacture of a high-class compound lard. For cooking sardines before packing in olive oil I am told it is unsurpassed. The best quality of arachide oil is selling wholesale at about 80 or 82 cents per gallon at this time, and lower grades at from 55 to 65 cents.

"The process of manufacturing the oil is simple, the nuts being pressed in the same kind of presses used for cottonseed. The oil is clarified in the same manner as olive oil, i. e., by filtering through layers of carded cotton, the quality depending largely upon number of filterings and the degree of clarification attained. The residuum is pressed into cakes, making an

excellent and nutritious food for cattle. This cake is selling at from 15 to 18 francs per 100 kilos, or from \$2.90 to \$3.47 for every 220 pounds.

"There is not a particle of waste in the manufacture. The shells are finely ground, mixed with common molasses, pressed into cake and used as cattle food, not so good, it is true, as the cake made from the residuum of the nuts, but still nutritious, and selling for about one-third its price. To make a fuel, which burns well and gives great heat, the powdered shells are mixed with coal dust and pressed into blocks.

"The records of the Bordeaux consulate show that the exports of arachide oil to the United States for the past five years amounted to \$115,220."

AN AIRSHIP OF WAR.

[Charlotte (N. C.) *Observer*.]

On the heels of the Dreadnaught comes yet another marvelous fighting craft to flatter British pride. This time it is the first really practical airship of war. For three and a half hours the new wonder, Nulli Secundus by name, executed most interesting maneuvers between Farnborough and the War Office in London, about 32 miles distant. At times she traveled at the speed of 40 miles an hour, and again dropped to less than 10; from swooping along so near the earth that the working of her propeller was plainly visible she rose with ease to an altitude of 1300 feet. Frequently she would dart upward or downward, in no case using ballast to accomplish the change in altitude. Whether sailing with or against the wind, she moved with the apparent ease of a great bird. Every intelligent observer of these performances must have been impressed with a sense of the deadly uses to which the new craft might be put. Obviously a small fleet of such fighters could carry enough high explosives to lay great part of London in ruins. Only by ceaseless vigilance on the part of their own airships and the airboat destroyers could armies be protected against death descending from above the clouds. Night battles a mile high between fleets contending in the glare of their searchlights would surpass anything known to the history of war. At any rate, John Bull intends to be fully prepared for any style of fighting in which he may feel called upon to engage. He now has craft under the water, on the water and in the air. In her way the Nulli Secundus marks a much greater advance upon present methods of warfare than even the Dreadnaught. No wonder John and all his isle feel proud.

DIGGING IN THE DIRT.

[Connecticut *Courant*.]

The New York insurance investigation conducted by Governor Hughes was an eye-opener, but this New York traction investigation which Mr. Ivins is now conducting makes one sick at the stomach. There is one remarkable difference between these two expositions of large finance. The insurance men knew that what they were doing was not decent, and they kept their expenditures for the manipulation of Legislatures as a close office secret, but they appear to have honestly believed that these expenditures were necessary, and that the dirty work paid for with company money had to be done. The best proof of their sincerity—mistaken and stupid as this sincerity was—is the fact that Governor Hughes, when he got his dredge low enough, almost always brought out a more or less distinct bookkeeping record of these shady transactions. It is true that the insurance investigation uncovered gross instances of favoritism and some colossal salaries, but in all these cases, we believe without exception, there was a fair pretence of work

done for the money paid and for the favors shown. It was all extravagant, wasteful and full of that individual conceit which grows in a little mutual admiration society where millions are at its disposal; but in the main all these extraordinary performances were duly recorded, and the records left in existence. It was all monstrously bad business, but a great part of it was not consciously dishonest.

The performances that Mr. Ivins is bringing to light wear another color. The first thing that he stumbled upon was a wholesale destruction of books of relatively recent date, and he has been bumping against a similar destruction of bookkeeping records ever since. More than this, such records as are brought out are confused and misleading. Money paid out for certain purposes is charged as if it had been paid out for other and far more reputable purposes. In short, the plain inference—indeed the only rational inference—is that the men who conducted these transactions knew what they were doing, and, because of this knowledge, deliberately and intentionally determined that no one else should ever be able to find out what they had done.

The men concerned in both the insurance doings and the traction doings were all financial magnates. They were the men who think, as we say with large American rotundity, in millions. But they did not think alike. The insurance men for the most part thought straight—foolishly, of course, and most extravagantly, but with conventional honesty. The traction men appear to have thought crookedly, if not like crooks. Nobody quite knows as yet, but all the signs indicate that most of them were on the make for themselves from the outset. If they had needed the money, as the variety actors say, that would be an explanation of their acts, however little of a justification; but most of them had money to burn when they began this work, so that one is forced to assume that they went about it all with the simple burglarious design of getting hold of as much more money as they possibly could.

It is a step downward from the insurance revelations to these traction revelations. The financial rottenness grows more rotten—and far more dangerous. Public rights and private rights seem to have been juggled with as if they were dice thrown by a barroom crowd for the drinks. Innocent investors bought in good faith the securities produced by these transactions on the assumption that men concerned in providing transit facilities for one of the great capitals of the world were not only capable, but honest. It was not only a justifiable assumption on their part, but an absolutely necessary assumption. It is an assumption that is made in this country, and in every commercial country of the world, thousands of times every day in the week; but when the processes by which these securities were produced are looked into, not with a view of disguising the processes and covering them up, but with the simple straightforward purpose of uncovering them, it becomes fairly clear that the assumption had little or no basis in fact. A discovery of this kind goes to the roots of business confidence, if, indeed, it does not tear business confidence out of the minds of men by the roots.

LIBERTY OF PRESS INVOLVED.

[Greenville (S. C.) *News*.]

Postmaster-General Meyer announced recently that he would recommend no increase in the rates on second-class mail matter. This is gratifying news, particularly to publishers. A while back there was some talk of increasing the rate of postage on this class of matter, following the agitation of scheme to put the news-

papers under the domination of the Government in the guise of increasing postal revenues.

The MANUFACTURERS' RECORD states the case clearly and with emphasis when it says:

"All discussions of postal reforms emanating from a recent regime in the Postoffice Department have turned upon the notion that for some reason or other the Postoffice Department should be a money-making institution. While the distinction in that particular among the different branches of the Government service should be made for the Postoffice Department has never been clearly shown, the continued agitation for 'reform' involving unwarranted control of the newspapers has led the people of the country to fear that the whole movement for reform has been a cover for irresponsible limitation of the freedom of the press. Therefore, while congratulating Postmaster-General Meyer upon the eminently sane determination, the people of the country should see to it that no Postmaster-General in the future shall have any reason to reverse that determination."

The Postmaster-General has acted wisely in this matter of such vital importance to the American people, and when the true situation is more generally understood the volume of applause which he will receive for his common-sense stand will be proportionately increased. Postmaster-General Meyer and those who will follow him will do well to bear in mind the wise words of Erskine, who said: "The press, my lords, is one of our out-entries; if we remove it, if we hoodwink it, if we throw it in fetters, the enemy may surprise us."

PHOSPHATES

Fertilizer Factory for Americus.

It is announced that a new enterprise, in which a number of capitalists of Americus, Ga., including Messrs. L. G. Council and Frank and Thomas Harrold, are interested, will be organized for the purpose of establishing a fertilizer plant at Americus. It is said to be the intention of the promoters to eventually erect a plant to cost about \$50,000, but for the present no building will be erected, a structure already having been secured for immediate use. The Home Mixture Guano Co. of Columbus, Ga., is understood to be interested in the new enterprise, and it is stated that the formula as owned and used by that company for manufacturing fertilizers will be used by the new company.

Phosphate Shipments.

Reports show the following shipments of phosphate rock from several Southern ports during the first nine months of the present year: Savannah, 121,483 tons of hard rock; Port Tampa, 34,771 tons of hard rock and 384,207 tons of land pebble; Fernandina, 105,630 tons of hard rock and 11,261 tons of land pebble; Port Inglis, 154,526 tons of hard rock; Brunswick, 36,749 tons of hard rock; Pensacola, 74,062 tons of Tennessee export rock, and Punta Gorda, 31,719 tons of Peace River pebble.

Phosphate and Fertilizer Notes.

The Ryland Phosphate Co. of Franklin, Va., has incorporated with a capital stock of \$75,000. Its officers are Messrs. P. D. Camp, president; P. R. Camp, vice-president, and J. M. Camp, secretary-treasurer.

Shipments of Peace River phosphate rock made by the Peace River Phosphate Mining Co. through the port of Punta Gorda, Fla., during October amounted to 1680 tons, making a total for 1907 of 33,399 tons.

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LUMBER

Lumber at Memphis.

[Special Cor. Manufacturers' Record.]
Memphis, Tenn., October 30.

It appears that large consumers of lumber are not placing their orders on as large a scale as it was expected by manufacturers that they would by this season. But nevertheless there is an improvement in the tone of the hardwood business. Both the summer and fall have been good for manufacturing, and logs have apparently been plentiful. Poplar and plain oak in the higher grades have recently been the most active items in the Memphis market. Cypress lumber is in only moderate supply, and is readily taken. There has been considerable ash on the market, and occasional concessions in prices. Quarter-sawn white and red oak are picking up in demand. Gum is being sold at somewhat reduced prices because of the large quantities coming in from the country. The lower grades of cottonwood are in good demand, but the narrow widths of first and seconds are rather sluggish.

In the cooperage market, which is quite an important one at Memphis, there is a large call for bourbon staves and heading. The oil cooperage season is just opening up with much vigor. There is a noticeable scarcity of both tight barrel staves and heading. The manufacturers are also giving some attention to tierce staves, for within about 30 days there will be a large business in this branch of the industry. The slack barrel makers are selling a great number of barrels and cottonwood staves in the Northwestern flour-milling centers and from the apple-shipping districts of Arkansas and Missouri. The elm hoop mills are selling their product in the districts just referred to, and also in the sugar trade of Louisiana, besides quite a few keg hoops in the nail manufacturing districts of Alabama and the East.

The wooden package trade is growing more brisk toward the holidays, and this class of business has been on for some weeks. The package makers here indicate that business is especially satisfactory on butter cases, lard buckets and candy pails. The egg-case trade has opened up earlier than usual this fall, and prices are a few cents higher than they ordinarily are so early in the season. The staple packing box trade is running along about as usual, with plenty of orders and firmly-sustained prices. The box and shoo people are consuming quantities of gum and cottonwood in their factories.

Memphis has gained a wide importance as an export market for lumber. This is one reason why the lumbermen of the city are so heartily interested in the deep-waterway scheme for the Mississippi river, for it would in reality make Memphis in effect an ocean port. The lumber could be loaded on ships right at the local bluff and at its arms. No class of local manufacturers took a deeper interest in the recent waterway convention held in this city and so ably detailed in the MANUFACTURERS' RECORD than did the lumber manufacturers.

The woodworking manufacturers of Memphis are much interested in the announcement that the Frisco Railway will expend \$350,000 in the improvement of its yards and terminal facilities in the Memphis district. The yards will be so increased as to allow the system to take care of 20 additional trains here.

The car shortage is observable now in lumber channels, but it is estimated by competent freight authorities that the movement during the past 30 days has been at least 30 per cent. better than during the corresponding period last fall. Equipment on most of the roads coming into Memphis has been increased. The

car works at Binghamton, the property of the American Car & Foundry Co., are turning out large numbers of freight cars every week, but are running behind on their orders, so great is the demand for cars all over the country.

The lumber and stave people of Memphis are giving closer attention each year to river transportation for their stock. One or two companies backed by Memphis capital have been organized to look after this class of business. The latest of these companies is the Patton-Tully Transportation Co. The company owns and operates a number of boats in this territory for handling lumber and timber shipments.

The building permits this autumn are showing a healthy increase over those of last year. For the last month, just compiled, an increase of \$19,262 is shown, the total value of the permits issued being \$261,014. There is also an increase in the number of permits issued, 226 being taken out in September, while only 172 were issued in the same month last year.

In 1894, just 13 years ago, a lot on the north side of Union avenue west of Freeman was sold at \$10 per foot. This lot, without the improvements, is now worth \$100 per foot.

In 1896 100 feet at the southwest corner of Monroe and Garland brought \$600. Its present value is about eight times as much.

A lot on the east side of McLean avenue 500 feet south of Union avenue was sold at \$7.50 per foot in 1896. It is now worth six times that amount.

Thirty-one acres lying south of the Nashville, Chattanooga & St. Louis Railroad and east of the end of the Lamar boulevard car line was sold only six years ago at \$15,000. Its present value is about eight times that amount.

SAVING YELLOW PINE.

Better Utilization of All Products of the Tree.

"In 15 or 20 years, at the present rate of cutting, the supply of the long-leaf yellow pine of the South, one of America's most useful forest trees, will be nearly exhausted," say the experts of the United States Forest Service. If these pine forests are wiped out one of the South's important industries will die—the production of the so-called naval stores.

People are still found who say that there is yet an inexhaustible supply of yellow pine in the South, and that all talk about a famine is unwarranted. Such statements are not justified by conditions, and the yellow-pine lumbering industry will soon be in the face of a serious shortage unless decided changes are made in the present methods and unless valuable products now going to waste are utilized. The long-leaf pine is a slow-growing tree, and does not make timber with anywhere near the rapidity that it is being cut. The situation calls for making the very best use of the present supply.

There are at present in the woods of the South vast quantities of pine logs and tall stumps left as a result of careless lumbering in the past. This material is rich in turpentine, and could be made to yield from 10 to 15 gallons of refined spirits per cord. Besides this, there is a great waste at the sawmills in the form of slabs, edgings and sawdust, all of which must have a value, but at present is for the most part simply burned to get it out of the way. In fact, not more than 50 per cent. of the tree as it stands in the forest comes to the market in the form of valuable materials.

In the year 1906 the reported cut of Southern yellow pine was some 12,000,000,000 board feet. A conservative estimate of the actual amount of turpentine alone, to say nothing of wood fiber and other materials, which could be produced

from the waste wood of this one year, would place the amount at not less than 30,000,000 gallons. This is a surprising figure when it is remembered that it represents an amount almost equal to the present annual production of gum spirits in this country. If this product were extracted from the wood and sold at even the current price of good wood turpentine the gross saving would be easily \$14,400,000.

Men have realized for some time that an enormous waste of valuable substances is going on, and a few have succeeded in extracting the turpentine and placing on the market a material of a fairly good quality.

The section of wood chemistry of the Forest Service has lately been investigating this subject, and it has been found that when properly made and refined, turpentines recovered from waste wood by the steam distillation process are in many cases even more uniform in composition than the gum turpentines, and for all practical purposes contain the identical substances. The odor often cannot be distinguished from that of the gum spirits, but even if it could this is a small matter in many cases, as infinitesimal and undetectable amounts of certain impurities left in the refined product as the result of the methods of production can produce this slight difference in odor, and the wood turpentine should not be condemned for practical purposes on this account. This becomes still more evident when it is known that the sweet odor of the gum turpentine is not characteristic of itself, but is due to an impurity produced by the chemical action of air upon it.

October's Building Record.

Figures available show that building operations throughout the South and Southwest during October have increased in valuation as compared with the corresponding month last year, although the month is generally regarded as not being a very active one in construction work. In Memphis, Tenn., the valuation of building operations during the month is estimated at \$281,839, an increase over October, 1906, of \$10,173. Permits issued during the month amounted to 283, an increase over the number issued in October, 1906, of 15. It is thought November will show a larger increase over November, 1906, as the building inspector has plans in his office for structures which represent a greater valuation than the total for the entire month of October. In Chattanooga, Tenn., 241 permits were issued during October, representing a valuation of \$110,855, of which it is estimated that 80 per cent. was for dwellings. Permits were issued in Dallas, Texas, to the value of \$136,489, and in San Antonio to the value of \$124,323, the latter representing 226 permits. The total valuation of permits issued in Oklahoma, O. T., during October is estimated at about \$300,000, an increase over October, 1906, of about \$125,000, and over September, 1907, of about \$190,000. The majority of permits issued during the month have been for residences ranging from \$5000 to \$25,000. In Baltimore, Md., building permits were issued for 181 dwellings, valued at \$289,100; four warehouses and manufactories, valued at \$17,500, and three hospital buildings, valued at \$150,000, making a total of \$456,600.

Completes Turpentine Plant.

The Southland Turpentine Co., A. McKinman, manager, is reported to have completed its plant at Lake Charles, La., for extracting turpentine from pine stumps. According to the process to be employed, it is stated that the stumps are first crushed and then conveyed to large vats or percolators, where they are subjected to a steaming process, which takes

out the turpentine. The wood is then re-conveyed to another vat, where a second steaming process removes the tar, after which the wood is used for fuel. The turpentine, after leaving the percolator, is conveyed to a settling tank, where it is allowed to cool and settle, and then put through a still and refined. The tar that comes from the second percolator is run into a heating vat, where all water is removed, and is then pumped into a storage vat. The plant is said to have a capacity of about 25 cords of stumps per day, which will produce approximately 6000 gallons of turpentine, beside the tar.

Georgia-Florida Sawmills.

At a meeting of the Georgia-Florida Sawmill Association at Jacksonville, Fla., last week a number of interesting subjects were discussed. In compliance with a resolution adopted at a meeting of the association in July it was stated that nearly all mills had closed for a period of 30 days, but prices had not improved. There has been a falling off in the demand for dimension lumber, causing lower prices, and the impression is said to prevail among the mill operators that this is due in a measure to adverse legislation toward railroads, which have inaugurated a policy of retrenchment.

New Turpentine Plant.

Mr. H. P. Landis of Beaumont, Texas, is reported as intending to establish a turpentine plant in Angelina county, Texas, on property of the Lufkin Land & Lumber Co. It is stated that the plant will be located near Warsaw, a few miles from Lufkin, at the eastern terminus of the Cotton Belt Railroad, and construction work has already begun. It will be operated by a company to be known as the Louisiana & Texas Turpentine Co., and is intended to develop about 35,000 acres of turpentine timber owned by the Lufkin Land & Lumber Co.

Shipments from Fernandina.

Shipments of lumber from the port of Fernandina, Fla., for October amounted to 11,708,000 feet coastwise and 3,321,701 feet foreign. In addition to the foreign shipments, other exports amounted to 515,850 gallons of turpentine, 75,728 barrels of rosin, 15,100 tons of phosphate. The aggregate value of outgoing cargoes during the month amounted to \$1,290,041.

Lumber Notes.

The Turpentine Operators' Association will hold its annual meeting on Friday of this week at the rooms of the Board of Trade at Jacksonville, Fla.

It is reported that H. H. Wheless of Alden Bridge, La., has purchased 10,200 acres of timber land near Mobile, Ala., which he will develop. The purchase price is stated at \$275,000.

The Sandy Run Lumber Co., recently incorporated at Norfolk, Va., is reported to have purchased 5000 acres of timber land in Pulaski county, and intends to install sawmills to develop the timber.

Messrs. F. K. Weikle, L. H. McHose, J. A. Trexler and associates have incorporated the Crimson Springs Lumber Co. of Crimson Springs, W. Va., with a capital stock of \$100,000 to develop timber and mineral lands.

The Arcadia Timber Co. of St. Louis, Mo., has incorporated with a capital stock of \$300,000 for the purpose of handling the product from 12,000 acres of timber land in Dunklin county, Missouri. Incorporators of the company include Messrs. G. A. Buder, C. E. Buder, Leo S. Ras-sieur, M. W. Finerbacher and Benjamin A. Suppon. Mr. G. A. Buder will be the president and general manager of the company.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

WESTERN MARYLAND.

Steady Progress During the Fiscal Year—Valuable Construction Work.

The forty-fifth annual report of the Western Maryland Railroad Co., covering the year ended June 30, 1907, shows railway gross earnings \$5,600,454, increase as compared with the preceding year \$798,330; operating expenses and taxes \$3,729,978, increase \$624,295; net earnings from railways \$1,870,476, increase \$174,065; total net income from railways, \$1,980,873, increase \$202,390; net profits from coal and allied departments \$674,677, decrease \$45,366; total net income \$2,655,550, increase \$157,023; total charges, which include interest on bonds, rentals of leased lines and interest on loans, \$2,644,586, increase \$397,568; surplus over all charges \$10,963, decrease \$240,545.

President B. F. Bush says, with reference to conditions surrounding traffic during the first half of the fiscal year: "A marked improvement in the situation in most of these respects was realized toward the close of the year, and continues to be reflected in present operations, as the published approximate results for the period already elapsed during the current year have indicated.

"During the year a much larger volume of coal and coke tonnage was handled by the railroad company to its tidewater terminals. The volume of traffic so handled is now constantly expanding, with the result of a longer haul on the company's rails, fuller use of its terminal facilities and more active and profitable movement of its equipment. As an illustration of the latter result, it will be noted that the number of miles run per system car per day on your road has increased 4.16 miles. Since the close of the fiscal year about three additional miles per day have been added to this averaged movement. * * *

"The decrease in net profits of coal and allied departments was due entirely to decreased earnings from real estate, the earnings from the coal department proper showing an increase."

For construction during the year the company has made expenditures upon the final work on the Cumberland extension, for completing reconstruction on the main line between Big Pool and North Williamsport, for completing the tidewater terminals at Baltimore, for double-tracking between Baltimore and Emory Grove, for improvements on the main line and reconstruction of the Gettysburg line and for construction of shops and purchase of equipment therefor. The work on shops, the double-tracking between Baltimore and Emory Grove and yard extensions, it is said, is advanced, and, excepting short sections of double track involving features which may be deferred without loss of necessary efficiency, will be completed soon at an additional expenditure of not over \$119,400. The improvement of the Gettysburg line has given the company practically a double-track road from Baltimore to the Blue Ridge, and the lighter grades of that line for eastbound trains have made it particularly valuable for handling coal traffic to the tidewater terminals.

The company bought during the year 1200 steel hopper cars, 1000 gondola cars, 20 freight locomotives, 1 Shay locomotive of 150 tons weight, 18 cabin cars, 2 parlor cars, 5 passenger cars, 4 passenger and baggage cars, 2 express and mail cars and 200 box cars.

The total assets of the company are \$87,445,274, in which the cost of the property,

including stocks of consolidated companies, is stated as \$52,800,630, not including the cost of building the Western Maryland Tidewater Railroad, amounting to nearly \$2,500,000, or the Cherry Run-Cumberland extension, costing nearly \$7,000,000. The capital stock is \$15,685,400 and the bonded debt \$58,718,875.

MISSOURI VALLEY LINE.

Electric Railway to Connect St. Joseph, Excelsior Springs and Mirabile.

Mr. H. G. Krake, secretary of the Missouri Valley Traction Co., St. Joseph, Mo., informs the MANUFACTURERS' RECORD that the company has been incorporated to build an interurban railway connecting St. Joseph, Mirabile and Excelsior Springs, Mo. Preliminary work is now under way, and no action will be taken toward negotiating for capital, materials or construction work before the preliminaries are completed. The route selected is eastward from St. Joseph to a point where the line can conveniently separate into two branches, one to Mirabile and the other to Excelsior Springs, approximately 65 miles. St. Joseph has a population of 120,000 and Excelsior Springs has a population of 4000. The country between the several points named is devoted to agriculture and is described as being highly cultivated and richly productive.

Mr. Krake says: "There is an excellent field for interurban development in the territory immediately surrounding St. Joseph, doubtless the most promising unoccupied territory in the country. The situation and conditions are attracting attention, and we anticipate in the near future important developments in this section."

The directors of the company are Thos. B. Campbell, president, St. Joseph, Mo.; L. L. Frost, first vice-president, Mirabile, Mo.; W. A. J. Bell, second vice-president; A. M. Bates, treasurer, both of Excelsior Springs, Mo.; H. G. Krake, secretary, St. Joseph; George C. Kidd, Excelsior Springs; J. R. Sprague, Mirabile; John I. McDonald, St. Joseph.

The preliminary work consists of running surveys, securing franchises and rights of way, providing estimates of construction cost and working out other details. It is further said that the encouragement received is such as to warrant the confidence of the promoters that sufficient money can be raised in the communities along the line, with possibly the assistance of a comparatively small bond issue placed elsewhere, to build, equip and operate the road.

BRISTOL TO KINGSPORT.

Proposed Line Which Will Connect With the South & Western Railway.

Mr. J. B. Cox writes from Johnson City, Tenn., to the MANUFACTURERS' RECORD that the incorporators of the Bristol & Kingsport Railway Co. are ex-Governor John I. Cox, Col. Sam L. King of Bristol, Tenn.; F. Powell, J. B. Cox, Johnson City, Tenn., and F. H. Cothran, Bristol, Tenn. They are also directors of the company, and its officers as follows: John I. Cox, president; Mr. King, vice-president; Mr. Powell, secretary and treasurer; Mr. Cothran, chief engineer, and Mr. J. B. Cox, general counsel.

Ex-Governor Cox and Mr. Cothran will go into the field this week to look over the route, and engineers will be at work locating the line within the next 10 days. The road will be built from Bristol, Tenn., through Sullivan county to Kingsport, Tenn., a distance of 25 miles.

Continuing, Mr. Cox says: "We will be ready to give contract for the grading, we hope, within six months. The grade

will not be heavy, and the line will be easily graded, as it is down the valley most of the way. Bristol is of about 1700 feet elevation and Kingsport about 1300 feet elevation. The waters which pass through Bristol flow into the river which goes by Kingsport. The Holston river, being the main source of the Tennessee river, is navigable from Kingsport down.

"We expect to connect with the Norfolk & Western Railway at Bristol and with the South and Western Railway at Kingsport, and with the Holston River Railway near Kingsport."

For Homeseekers.

Mr. S. A. Hughes of St. Louis, general passenger agent of the St. Louis & San Francisco Railroad, writes to the MANUFACTURERS' RECORD:

"It will doubtless be of interest to your readers to know that the Beaumont, Sour Lake & Western, the Orange & Northwestern and the Colorado Southern, New Orleans & Pacific (new Frisco lines), forming the through direct line between Houston and New Orleans, will be open for operation early in January, 1908. I have just covered the territory by motor car, and it was a revelation to me to see so large an area of fertile and productive territory along these lines, the country being rich in timber, it being estimated conservatively that tributary to these lines there is approximately 7,000,000,000 feet of long-leaf yellow pine, oak, hickory and various other kinds of timber. There is also to be found much cut-over land and much land to be drained and placed in shape for cultivation, the country being susceptible to drainage, having a gradual slope toward the Gulf and the bayous. There are many tracts of land, however, particularly prairie land, along these lines now ready for cultivation, the land being adaptable to the growing of corn, cotton, cane, rice, fruit and truck. There are many opportunities offered in this new country to the homeseeker and to the investor, and I was particularly impressed with the high state of cultivation as observed in the vicinity of Orange, Crowley and Opelousas, the country having been under a high state of cultivation for many years, and shows conclusively that the same character of soil in the undeveloped sections can be made to yield bountifully, and I predict that when the new line is placed in operation and ready for business that the homeseeker and the man interested in timber projects will take advantage of the opportunities offered, and it will not be many years until these new properties will be highly developed and will yield a large amount of revenue, resulting beneficially to all concerned."

Alabama Great Southern's Year.

The annual report of the Alabama Great Southern Railroad Co., covering the year ended June 30, 1907, shows that the company operated 309 miles of line. The income account shows gross earnings from operation \$4,168,478, increase as compared with last year \$393,857; operating expenses and taxes \$2,406,554, increase \$344,687; net earnings from operation \$761,924, increase \$49,170; total income \$816,962, increase \$50,899; balance of income over charges \$413,677, increase \$15,212. After the payment of dividends there was a balance carried to credit of profit and loss of \$210,556, increase \$7444.

The company bought during the year 13 locomotives, 6 passenger train cars and 1 derrick car, besides building 4 cabooses at the company's shops. There were also received 8 locomotives and 2000 freight cars, contracted for before the beginning of the year. The total equipment is now 88 locomotives, 43 passenger train cars, 6253

freight train cars and 11 road service cars.

The company did considerable repair and betterment work, including the installation of electric signals, changing of a grade, laying new rails of 80 pounds to the yard and building several side-tracks, besides renewing ties and ballasting. All the main line is now laid with either 75 or 80-pound rail. The other betterment work included such things as building of water tanks, small freight depots and other small buildings, in addition to an extension of shops and other betterments to structures.

The report also notes that the new passenger station at Birmingham was put in service during the past summer, although not completed, and that the passenger station at Chattanooga is under construction.

The total assets of the company are \$21,341,225, the cost of road being given as \$12,909,172. The capital stock is \$11,210,350, of which \$3,380,350 is preferred.

Mobile & Ohio Annual Report.

The Mobile & Ohio Railroad Co. has issued its fifty-ninth annual report, which covers the fiscal year ended June 30, 1907. The company operated 926 miles of line. The income account shows gross earnings from operation \$10,759,519, increase as compared with last year \$1,313,591; operating expenses and taxes \$7,643,087, increase \$1,097,652; net earnings from operation \$3,116,431, increase \$215,938; total income \$3,239,861, increase \$214,558; balance of income over charges \$721,239, out of which was paid dividends, leaving a balance carried to the credit of profit and loss of \$420,209, increase \$227,548.

The company purchased during the year 25 locomotives, 1000 box cars, 750 gondola cars, 19 way cars and 10 passenger coaches. Delivery of the freight cars is to be completed by the end of December. The company now has 246 locomotives, 125 passenger train cars, 9660 freight train cars and 445 road service cars. The total assets of the company are \$41,449,875, in which the cost of road is given as \$28,199,709. The capital stock of the company outstanding is \$7,730,000, the authorized capital stock being \$10,000,000.

The company spent much during the year in maintaining and bettering its property, including the building of several new steel bridges, three being of 125 feet span each and one of 200 feet. There was also a large concrete arch built over one stream, its span being 91 feet. In renewing track and in renewing rails weights of 75 pounds and 85 pounds per yard were used. During the year the company put in use its new union passenger station at Mobile, Ala. The company also completed the reduction of grades and curves between Jackson, Tenn., and Corinth, Miss., and all iron bridges on the main line from St. Louis to Mobile have now been replaced by modern steel bridges.

Memphis to Mexico, Mo.

Mr. A. W. Carpenter writes from Memphis, Mo., to the MANUFACTURERS' RECORD concerning the proposed railroad from Memphis to Mexico, Mo., and says:

"It is to be the extension of the Iowa-Missouri Traction & Power Co., which has its northern terminal at Fairfield, Iowa. We are to get the power at Keesauqua, Iowa, on the Des Moines river, by putting in two dams. The bend in the river has a fall of 19 feet in 14 miles, and across the neck, where we propose to put in the dam, is only two miles, so we will have the power plant only one mile from each dam. The two dams will generate about 9000 horse-power, and we will have power to run 200 miles of electric road and have some left for commercial use.

"We now have all the necessary work

done from Fairfield, Iowa, to Memphis, Mo., and have the contract work with a bond for the fulfillment of the same. We are now asking the people along the line from Memphis to Mexico to aid us by taking stock in the company at the sum of \$2500 a mile. Mr. D. Fitzgerald of 80 Wall street, New York, is to finance the proposition after we have all preliminary work done, which will be in shape by the spring of 1908."

New Equipment, Etc.

The Western Steel Car & Foundry Co. at Anniston, Ala., is building 200 fruit cars for the United Fruit Co., besides 500 cars for the Virginia & Southwestern Railway, 300 for the Atlanta, Birmingham & Atlantic Railway and 300 for the Panama Canal.

An officer of the Richmond branch of the American Locomotive Co. is reported as saying that the works are busier than ever.

The Baldwin Locomotive Works is reported to have received orders for one locomotive each from the Interstate Railroad, the West Virginia Northern Railroad and the Morehead & North Fork Railway.

The San Antonio & Aransas Pass Railway is reported to be getting estimates on 200 ventilated box cars and 275 ordinary box cars.

The Southern Railway is reported to have ordered 25 locomotives from the Baldwin Works.

The Florida East Coast Railway has, it is reported, bought 12 locomotives from the American Locomotive Co.

The Birmingham Iron Co. has ordered one locomotive from the American Locomotive Co.

The Eldorado & Wesson Railway has ordered one locomotive from the Lima Locomotive & Machine Co.

Western Maryland's New Shops.

The new shops of the Western Maryland Railroad Co. at Hagerstown, Md., have been completed and are to be occupied immediately. The shops and yards cover 25 acres. There are four miles of tracks. About 200 men will be employed at the plant, but more will be added as the works are developed. The shops at Union Bridge will, it is stated, continue to be run, but with reduced forces. The principal buildings at the Hagerstown shops are a locomotive and machine shop 150x300 feet, a blacksmith shop 100x150 feet, power-house 65x50 feet, boiler-room 75x50 feet, office and general stores building 100x45 feet.

Providence to Dawson, Ky.

Mr. J. T. Edwards writes from Providence, Ky., to the MANUFACTURERS' RECORD: "All action in regard to the construction of the railroad from Providence to Dawson, Ky., has been arrested for the present. The route has been surveyed from Providence to Dawson, and has a length of 19 miles. It traverses the richest section of the Western Kentucky coal fields. With the opening of the spring of 1908 the construction of this road will take up attention."

St. Louis to Chicago.

The Chicago & East St. Louis Short Line Railway Co. has been incorporated in Illinois to build a steam railroad from St. Louis, Mo., to Chicago, Ill. The incorporators and directors are H. C. Osterman, William M. Drennan, H. C. Dolph, Thomas W. Flynn and William Anderson. The headquarters of the company are in Chicago, and its capital stock is \$50,000.

Mr. T. J. Shelton has been appointed traffic manager of the Arkansas, Louisiana & Gulf Railway, with headquarters at Monroe, La.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

A Textile Plan.

Great interest will be taken in the experiment proposed by Mr. L. G. Finch of Sherman, Texas, and sketched in a letter to the MANUFACTURERS' RECORD. He proposes to establish a mill which will take the seed cotton, gin it, spin it, weave and knit it, bleach it and manufacture it into garments to be sold direct from the mill to the consumer. He writes:

"I am going to start it small enough to manage myself and to find out what there is in it. I have been through all the processes from the field to the finished garments, know the possibilities, expense and profit in each transaction from the grower to the wearer, and I am accumulating money and machinery to do the work. There is no bleachery in Texas, and no prospect of one for some time to come. Large or small, one would pay, for Texas mills ship every pound of their product except brown cotton bagging or duck, unbleached, to Eastern markets. This will be no corporation, company or association. I shall swing it and run it alone and set my own prices for material and product."

Skyland Hosiery Co.

Last month the MANUFACTURERS' RECORD referred to the plans of the Skyland Hosiery Co., which had been reported incorporated in August to establish a large hosiery mill at Flat Rock, N. C. Further particulars can now be stated. The company has begun the erection of a modern mill building and is building other structures in order to provide for a mill village. It has decided to begin manufacturing with 200 knitting machines and complement of loopers, ribbers and other machinery, the daily capacity to be 1000 dozen pairs of men's fine hose, and 150 operatives to be employed. It is the intention to increase this capacity in the future to 3000 dozen pairs daily and employ 450 operatives. By January 1 the initial plant will probably be in operation. The Skyland Hosiery Co. has a capital stock of \$300,000, and \$150,000 is paid in. Its officers are: J. F. Wilcox, president; F. S. Wilcox, vice-president; H. E. Stillwell, treasurer, and C. P. Rogers, superintendent, at Flat Rock.

Mishna Cotton Mills.

The stockholders of the Mishna Cotton Mills of Union, S. C., will hold a meeting soon to effect organization and perfect plans for building a cotton mill of 15,000 spindles and 450 looms for manufacturing fancy cotton and lawns. This plant is to employ about 300 operatives, and will probably be operated by electricity from the transmission lines of the Southern Power Co. of Charlotte, N. C. The Mishna Cotton Mills was reported last week as incorporated by Messrs. L. M. Jordan, A. H. Foster, B. F. Arthur and others, the capital stock being \$300,000.

The Cherokee Mills.

The Cherokee Mills of Griffin, Ga., has decided upon the installation of 10,000 ring spindles and looms to match to begin with, and will install more machinery later on. This company was mentioned last week by the MANUFACTURERS' RECORD as organized with capital stock of

\$200,000. It will immediately begin the construction of the necessary buildings, but will not award any building contracts, intending to employ a foreman and build by day labor. The necessary textile machinery has been purchased. J. J. Mangham is president.

World Spindles.

A census of the International Federation of Master Cotton Spinners and Manufacturers' Associations estimates that during the year ended August 31 last 114,006,168 spinning spindles were at work in the world, of which 50,679,641 were in Great Britain, 26,242,000 in the United States, 9,339,448 in Germany, 6,800,000 in France, 6,500,000 in Russia, 3,616,434 in Austria, 3,500,000 in Italy and the rest in Switzerland, Belgium, Japan, Spain, Portugal, Holland, Sweden, Denmark, the Levant and Egypt.

Conneross Yarn Mill.

The Conneross Yarn Mill of Anderson, S. C., mentioned last week as incorporated, has a capital stock of \$60,000 and takes over the 800-spindle yarn mill heretofore operated by the Anderson Phosphate & Oil Co. Messrs. A. S. Farmer, Robert P. Hooper, T. B. Earle, Furman Smith, H. T. French and W. H. French are the directors. Mr. Farmer has been elected president; W. H. French, vice-president, and Mr. Earle, secretary.

Wants a Cotton Mill.

The MANUFACTURERS' RECORD is informed that the people of Clarksville, Ga., are desirous of having a cotton mill established in their city. It is stated that raw material, labor and water-power is available for such an industry. For information address the Board of Trade.

Textile Notes.

It is reported that L. Straus of Burlington, N. C., will establish a plant for manufacturing felt from waste and trimmings of cotton spinning and hosiery knitting mills.

It is proposed to organize a company with capital stock of \$100,000 for the purpose of building a cotton-yarn spinning mill at Senoia, Ga. H. P. Redwine is interested in the project.

The Eno Cotton Mills of Hillsboro, N. C., has about completed the construction of its dyehouse and finishing building, 75x300 feet, and the equipment of machinery is now arriving. This company has added 232 looms and preparatory machinery. It has been operating 20,000 spindles and 400 looms.

The Denton (N. C.) Cotton Mills Co., recently reported incorporated with capital stock of \$100,000, has purchased site and is planning to begin the construction of its proposed 5000-spindle cotton-yarn mill. Messrs. Berry Davidson of Gibsonville, N. C.; J. W. Noel of Lexington, N. C., and J. A. Noel of Roxboro, N. C., incorporated the company.

Winter Excursions.

The Merchants & Miners' Transportation Co. has issued its winter excursion book, which is devoted particularly to Southern resorts, including Cuba. The book is prettily illustrated and contains valuable information relating to routes, hotels at various points and the rates thereof, besides other facts concerning tickets and baggage. The company also has personally-conducted tours in February and spring tours in March, April and May. Copies of the excursion book can be obtained from W. P. Turner, passenger traffic manager at Baltimore.

The total production of coke in the United States in 1906 was 36,401,217 short tons, of which 8,953,446 tons were produced in six Southern States.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Wanted for Norway Trade.

A Norway correspondent of the MANUFACTURERS' RECORD writes:

"Being several years established in the oil and machinery trade, I am in constant touch with all the leading shipbuilding firms, dock yards and consulting engineers, besides having travelers working the country all the year round, and have not the slightest doubt of a fair turnover, subject to the articles being up to date and prices reasonable.

"The reason why I do not wish to have my name appear meantime is that the firms in question may already be represented.

"Firms that I want to come in contact with are manufacturers of steam steering gears, patent stokers, ash hoists, forced-draft apparatus, engine telegraphs, davits, sounding machines, etc.; pneumatic tools and electric drills."

(Letters addressed to "Norway Trade," care of the MANUFACTURERS' RECORD, will be forwarded.)

MINING

Developing Fuller's Earth.

A dispatch from Attapulgus, Ga., states that the Lester Clay Co., which was organized with a capital stock of \$75,000 and has recently completed a fuller's-earth plant at Attapulgus, is now actively engaged in developing the deposits. The plant is said to be equipped with modern machinery and the product an exceptionally good grade of fuller's earth. In addition to this enterprise the company is reported as to engage extensively in growing shade tobacco, having its own warehouse, where the tobacco will be prepared for the manufacturer. Officers of the Lester Clay Co. are Messrs. W. J. Kelly, president; George L. Drew and J. R. Walker, vice-presidents; J. H. Burroughs, secretary and treasurer, and A. S. Beville, general manager, all of Jacksonville, Fla.

Big Purchase of Tennessee Lands.

A recent report announced the purchase of about 120,000 acres of coal lands in Morgan and Rowan counties, Tennessee, by I. W. Culp of Temple, Texas, and associates. With reference to this report Mr. Culp informs the MANUFACTURERS' RECORD that details for developing the property, including the organization of a company, have not been completed.

Mining Notes.

Exports of coal and coke from Baltimore, Md., during October amounted to 36,927 tons of coal and 3733 tons of coke.

The Hickory Grove Mining & Milling Co. of Joplin, Mo., has been incorporated with a capital stock of \$500,000 by Messrs. H. Connelly, John Dolan, P. E. Pritchard, Jr., and John Comerford.

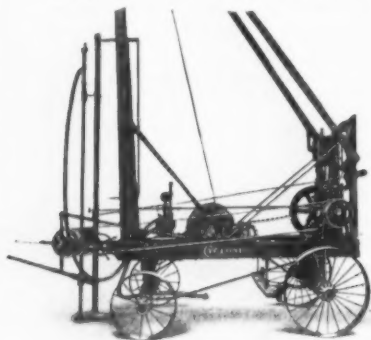
Messrs. C. H. Brown of Dallas, Texas; G. M. Voires, Forney, Texas, and T. M. Dees of Midlothian, Texas, have incorporated the Granite Manufacturing Co., with a capital stock of \$300,000, to develop granite quarries at Granite Mountain.

The Baker's Run Coal Co. of Sutton, W. Va., has incorporated with a capital stock of \$125,000 to mine coal and manufacture coke in Braxton county. Its incorporators include Messrs. E. D. Miller, J. B. Adams, Ella C. Adams, L. G. Chorpennig and associates, all of Uniontown, Pa.

MECHANICAL

New Type of Core Drill.

Owing to the demand for a core drill capable of removing cores from all strata from which it is possible to obtain a core and without the use of diamonds, the Cyclone Drill Co. of Orrville, Ohio, is offering a line of Diamondite core drills embodying the tried-out devices which have been found the most practical on various core-drilling machines, with new features. The accompanying illustration shows one size with engine, hoist, pump and rotator complete. These drills are also built with boiler mounted on same trucks, thus making a plant which is easily moved from one



NEW TYPE OF CORE DRILL.

hole to another without disconnecting any part of the machinery, and frequently without having to lower the derrick. This also enables the drill to be moved short distances under its own power.

The machines are operated by steam, gasoline, compressed air or electric power. The hoists are of the single-drum friction type operated by a single lever, working on a double screw, capable of transmitting the entire pull of the engine without slipping. A powerful band brake admits of holding and controlling the tools at any desired point. The engine is driven direct from the engine shaft with sprocket chain to prevent slippage when raising or lower-

throughout. The triangle formed by the guides and the spindle makes a rigid construction and eliminates the vibration, which is so detrimental in securing good cores, and as all standard core barrels are made 10 feet long, the entire run can be made without stopping the drill.

Artistic Porches in Concrete.

For home adornment a well-designed porch is effective. It can give an ordinary house a fine appearance, and where the building is in itself attractive the artistic



ARTISTIC PORCHES IN CONCRETE.

porch is an added feature affording satisfaction to the owner and to beholders. Artistic porches can be readily manufactured of concrete, and there are many instances in which buildings already in existence have been greatly improved by adding a concrete porch. Such an instance is seen in the accompanying illustration, presenting a view of the residence of W. P. Niles at Wellington, Canada. This was an old foundry built of brick. The old brick walls were given a coat of cement plaster, bow windows were built and the

sents views of a number of dwellings improved by concrete porches.

No. 141 Three-Side Sticker.

Managers of woodworking plants will be interested in the accompanying illustration of the No. 141 A sash-sticking machine, with sash-cord attachment.

This machine is built to work one, two or three sides. The one-side machine, with tophead, can be used as a sash, door and blind sticker or one-side molder with four-side slotted head four inches long. The bed will drop 16 inches.

stile being passed over the narrow grooving head to its stop completes the operation, when the operator places the stile between the feed rolls to run through the machine.

There are two strongly-driven feed rolls, held firmly down by weights, and a large idle roll in the bed, giving a very strong feed. The top rolls can be quickly raised from the material by handle provided, and thus stop the feed and at same time release the piece should there be a wish to remove it. There is also a binder control of feed by which it may be started or stopped.

The machine is strongly belted with good length of belts running over proper size pulleys.

All head arbors are fitted in the White adjustable clamp bearings, making this a most satisfactory running machine.

The spring posts are all held by H. B. Smith double-arm spring post binder, with wrenches attached.

There are regularly furnished with each machine one four-side slotted head for each arbor with cutters and bolts, one cap head, two Shimer patent grooving heads with cutters and one seven-eighths-inch bit for sash-cord attachment, and all necessary wrenches.

The machine is manufactured by the H. B. Smith Machine Co. of Smithville, N. J.

The Hercules Wall Tie.

*The use of wall ties in buildings has reached large proportions. The old method of erecting a wall of pressed brick required a course of headers, which detracted from the appearance of the building. Subsequently the idea of dispensing with the additional brick was evolved, and



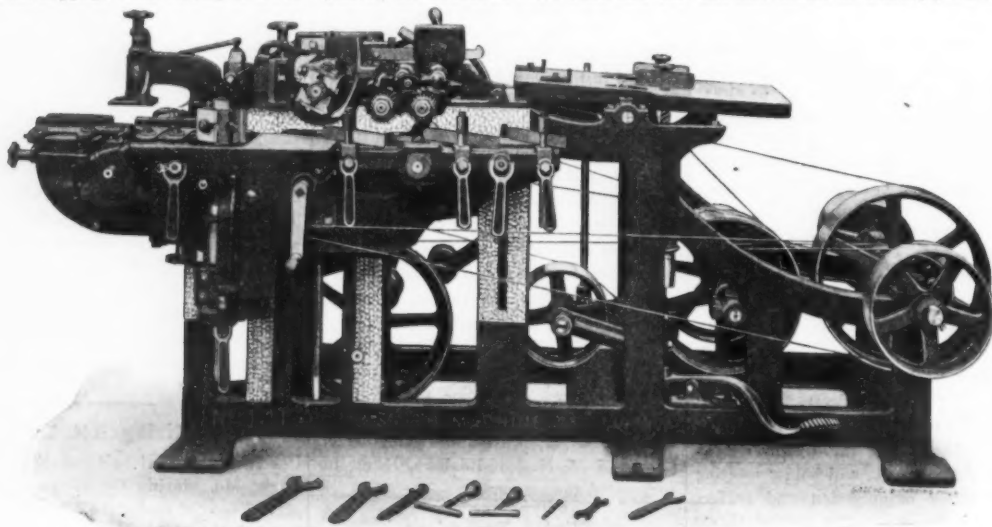
THE HERCULES WALL TIE.

the wall tie came into prominence. Two results were at once accomplished—the saving in the cost of headers and the restoring of a good even appearance to the front of the building. It is estimated that the use of wall ties has grown to upward of a billion annually.

One of the early wall-tie manufacturers was O. D. Levering, 81 North 4th street, Columbus, Ohio. His work proceeded along original lines, and the best galvanized steel and steel wire is used. Some of his designs were radical departures from existing types. In all, his product embraces five distinct designs and two styles of veneer ties. He has now added a new one, which will be introduced under the name of the Hercules wall tie. It presents on both edges a series of faces to which the mortar may adhere, and in addition the tie is corrugated, so that the mortar can take hold both at top and bottom. The bonding surface is on four sides.

Mechanical Engineers.

The fifty-fourth annual meeting of the American Society of Mechanical Engineers will be held in the Engineering Societies Building at 29 West 39th street, New York, December 3-6, 1907. Symposiums on foundry practice, giving the experiences of prominent men in that work, have been arranged. The specific heat of superheated steam will be taken up; a very important and exhaustive work by a professor of engineering at Cornell, will be presented. The utilization of low-grade fuels in gas producers, combustion control in gas engines, tests of producer-gas engines, etc., will be given a session. Other live topics, such as industrial education, power transmission by friction driving, cylinder port velocities, etc., will be discussed.



No. 141 A THREE-SIDE STICKER.

ing the tools. The hoist is operated entirely separate from the rotator. The rotator is provided with cut gears, phosphor-bronze bushings and mounted on substantial frame; it is controlled by a multi-band clutch on the driving shaft to admit of its being stopped and started instantly by the operator. The heavy steel shafts that carry the rotators are provided with a rack and pinion to facilitate the sliding of the rotator back on its supports, entirely out of the way without removing the drill spindle. This saves much time when removing the rods from the hole. The guide rods allow the use of a 10-foot spindle, and the connection between the water swivel and these guide rods is ball bearing

roof covered with new tile. One of the best and most striking features is the veranda, which is trimmed with concrete columns, balustrade, finials, etc., produced entirely in iron molds manufactured by the Simpson Cement Mold Co. of Columbus, Ohio.

Ornamental cement blocks from Simpson molds are in evidence in all parts of the country. They have contributed to popularize cement for residence construction. The molds are also used very extensively in constructing new fronts for frame and brick buildings and replacing decayed and dilapidated wood porches.

The Simpson Cement Mold Co. is distributing an illustrated folder which pre-

quarter inches where heads go, and all heads have the same size cutting circle. The underhead has three bearings, the cutter of which is easily removable for change of heads, and all heads are adjustable to working face as well as depth of cut.

The boring and grooving attachment is not in the way of any of the other operations, and by it the stiles are bored and grooved without loss of time. The grooving is done with Shimer patent grooving heads. The stile is placed on the table, pushed against a stop; depressing the treadle causes the bit to bore the hole at an angle so the knot in cord, or thimble, if used, pulls back to bottom of the hole, then raising the foot, the bit drops; the

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Baltimore, Md.—City ordinance has been passed appropriating \$11,500 for construction of bridge over Gwynn's falls at Hollins street; B. T. Fendall, City Engineer, City Hall.

Baltimore, Md.—Designs have been approved for construction of reinforced-concrete bridge, three-span, 450 feet long, over Gwynn's falls at Frederick avenue to cost about \$150,000; B. T. Fendall, City Engineer, City Hall.

Graham, Texas.—Young county will construct two bridges across Brazos river, for which \$40,000 of bonds have been voted. Contract will be let November 20; George H. McLaren, county judge. (See "Machinery Wanted" column.)

Lawton, O. T.—Comanche County Commissioners have awarded contracts to amount of \$30,000 for erection of bridges over streams in Comanche county. J. A. Parkinson, County Commissioner, states that county will not expend \$156,000 in building bridges, as recently incorrectly reported.

Macon, Ga.—Atlantic Compress Co. will build underpass and steel bridge at Poplar street.

Richmond, Va.—Henrico county will construct 50-foot span reinforced-concrete bridge and repair old abutments over North Run creek. Contract will be awarded November 9; W. C. Saunders, chairman Board of Supervisors. (See "Machinery Wanted.")

Tampa, Fla.—Tampa & Sulphur Springs Traction Co. has awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., for construction of steel bridge across the Hillsborough river, to be 27 feet wide and provide space for car tracks, wagons and pedestrians.

Tampa, Fla.—City Council will probably authorize ordinance providing for issuance of \$150,000 of bonds for construction of bridge across the river at Lafayette street. Election will be held December 10; W. H. Frecker, Mayor. (Recently mentioned.)

CLAYWORKING PLANTS

Attapulgus, Ga.—Lester Clay Co., previously organized with \$75,000 capital stock to develop fuller's-earth deposits, has completed proposed plant; W. J. Kelly, president; Geo. L. Drew and J. R. Walker, vice-presidents; J. H. Burroughs, secretary-treasurer, and A. S. Beville, general manager, all of Jacksonville, Fla.

Beaumont, Texas.—Gulf States Brick Co. will change from oil to wood as fuel and will cut into cordwood the timber on 1500 acres of land. Company will also increase capacity of its plants at Beaumont and Loebe, Texas, at present producing from 25,000,000 to 30,000,000 brick annually.

Easton, Md.—Brick Plant.—Joseph H. White & Sons are installing brickmaking machinery of 20,000 daily capacity, including a rack steam brick drier system furnished by Henry Martin Brick Machine Manufacturing Co., Lancaster, Pa.

Hansen, Ga.—Hansen Sand-Lime Brick Co. will enlarge its plant to three times present capacity, necessitating the installation of additional sand-lime brick machinery—presses, retorts, cast-iron cars, turntables, hydraulic equipment for lime, etc. (See "Machinery Wanted.")

Newman, Ga.—J. P. Jones & Son will erect brick plant, utilizing Chattahoochee river clay deposits.

Parkersburg, W. Va.—Reported that East Liverpool (Ohio) capitalists, represented by A. E. Bowdler, contemplate establishing the plant in Parkersburg.

Wheeling, W. Va.—Ceramic Supply Co. incorporated with \$50,000 capital stock to manufacture sanitary, utilitarian and art pottery wares by C. W. Franzheim, John H. Taylor, H. A. McNicol, A. M. Haddox and others.

COAL MINES AND COKE OVENS

Big Stone Gap, Va.—Union Coal & Coking Co. incorporated with \$10,000 capital stock; A. K. Morrison, president, and D. E. Allen, secretary.

Keokee, Va.—Keokee Coal & Coke Co. will not build any additional coke ovens at present. Those referred to last week are the 400 ovens on which work was begun some time ago, and they are expected to be in operation by December 1. H. E. Judd is superintendent at Keokee; offices at No. 2 Rector street, New York.

Little Rock, Ark.—Arkansas Anthracite Mining Co., recently reported incorporated, will purchase machinery and operate coal fields when railroad is extended from Paris, 20 miles distant. H. L. Rummel is president and Geo. B. Rose secretary-treasurer. Coal fields are owned by Arkansas Anthracite Coal Co., H. L. Rummel, president.

Louis, Ky.—Louis Coal Co., recently noted to develop coal property near Louis, has selected Fred S. McConnell, Mt. Vernon, Ohio, for general manager; engineer in charge is John M. Raybourn, Pittsburg, Pa.

Linden, Va.—Virginia Iron, Coal & Coke Co., Bristol, Va.-Tenn., will not at present build new coke ovens recently incorrectly reported.

Lumberport, W. Va.—Blue Ridge Coal Co., recently reported incorporated (under Clarksburg, W. Va.), will develop and operate mines; capacity 200 to 400 tons per day; no coke ovens; construction work contracted for and supplies purchased; main office, Clarksburg, W. Va.; president, B. F. Thompson.

Moundsville, W. Va.—Panama Coal Mining Co. incorporated with \$500,000 capital stock by D. H. Little, Samuel Garrison, S. L. Bellman, August Gertner and John Crowley, all of Pittsburg, Pa.

Oakland, Md.—E. C. Scott, representing a mining syndicate of Fairmont, W. Va., has leased for development 10,000 acres of land understood to be underlaid with coal and other minerals.

Rowan County, Tenn.—I. W. Culp of Temple, Texas, and associates have purchased 120,000 acres of coal lands in Morgan and Rowan counties, Tennessee, as lately reported, but have not completed details for developing the property.

Sutton, W. Va.—Baker's Run Coal Co. incorporated with \$125,000 capital stock by E. D. Miller, J. B. and Ella C. Adams, L. G. Chorpennig and others, all of Uniontown, Pa., to mine coal and manufacture coke in Braxton county.

Yolande, Ala.—Dr. G. B. Crowe, Birming

ham, Ala., is progressing with enlargements at the Yolande and Connelleville coal mines.

CONCRETE AND CEMENT PLANTS

Atlas, Texas.—B. F. McKay and others will not establish concrete and cement plant recently incorrectly reported.

Oklahoma City, O. T.—Hollow Concrete Pole Co. incorporated with \$50,000 capital stock by F. H. Tildman, J. W. Graves and William B. Dean.

St. Stephens, Ala.—John R. Markley of Markley & Miller, Chicago, Ill., interested in cement lands near St. Stephens, is reported as to establish cement plant, investing about \$2,000,000.

COTTON COMPRESSES AND GINS

Aiken, S. C.—H. C. Hahn contemplates rebuilding ginnery some time next year. (Recently reported burned.)

Anderson, S. C.—People's Oil & Fertilizer Co., J. J. Fretwell, president, will erect cotton gin to accommodate four batteries of 4-70 saw gins, with revolving presses, etc.; cost of building, \$12,000; cost of machinery, \$15,000; machinery purchased from Continental Gin Co., Birmingham, Ala. This gin replaces plant lately destroyed by fire. (Recently mentioned.)

Baton Rouge, La.—Baton Rouge Compress Co. is installing cotton compress with capacity of 100 bales an hour.

Clasco, Texas.—Clasco Farmers' Union Gin Co. incorporated with \$5000 capital stock by W. L. Palmer, T. A. Strain, John W. Boatman and others.

Gainesville, Fla.—W. W. Gordon & Co., 110 Bay street East, Savannah, Ga., will probably rebuild Sea Island cotton ginnery recently destroyed by fire.

Newbern, N. C.—Newbern Cotton Oil & Fertilizer Mills, R. F. Broadbudd, president, will rebuild cotton gin recently reported burned; two-story building, 50x60 feet; brick; cost \$2500; cost of machinery to be installed, \$3000; capacity of plant, 50 to 60 bales cotton; I. L. Cosby, engineer.

Palmyra, Ark.—Farmers' Union Gin Co., W. L. Thomasson, president, recently reported incorporated, will erect cotton gin in connection with grist mill; building to be 60x80 feet; cost of building, \$500; cost of machinery, \$2435; gin capacity, 30 bales per day; engineer, J. B. Moran; manager, I. S. Owen.

Trio (P. O. Centerville), Ala.—C. H. Cleveland will rebuild cotton gin recently reported burned. (See "Machinery Wanted" column.)

ELECTRIC-LIGHT AND POWER PLANTS

Ardmore, I. T.—Ardmore Traction Co. incorporated with \$500,000 capital stock, will construct and operate plants to generate and produce electricity and other motive and illuminating powers. Company will apply for franchise. C. L. Byrne is president.

Ashboro, N. C.—Genton Lumber Co. proposes to furnish electric light and power in connection with operation of lumber plant. (See item under "Lumber Manufacturing.")

Baltimore, Md.—Trustees of University of Maryland have awarded contract to Morrow Bros., 218 West Saratoga street, for construction of nurses' home and power-house; Sunderland Bros., architects, Ouray Building, Washington, D. C.

Baltimore, Md.—Consolidated Gas, Electric Light & Power Co., P. O. Kelholtz, consulting engineer, Lexington and Liberty streets, will make extensive improvements to Peun-street substation. Steel trussed roof, steel columns, slag roof, skylight will be installed. George Bunnecke & Sons, 305 St. Paul street; M. C. Davis, 5 Hopkins place, and H. H. Brown, 109 Clay street, are estimating on work.

Columbus, Ga.—Charles E. Main and John E. Porter, consulting engineers of Stone & Webster, 84 State street, Boston, Mass., have inspected power-house at the City Mills with view to making improvements to increase capacity of the plant, which is leased by the Columbus Railroad Co. Messrs. Main and Porter have also inspected water-power plant at the Eagle & Phenix Mills, which is to be improved.

Goliad, Texas.—Dr. L. W. Chilton will install electric-light plant. It is understood that construction work has begun and machinery has arrived.

Headland, Ala.—City will vote December 1 on issuance of \$23,500 of bonds for constructing electric-light plant and water-works. City previously authorized \$20,000 of bonds for this purpose, but amount is claimed to be insufficient, and another election will be held. Address The Mayor.

Laurens, S. C.—Reedy River Power Co. has about half completed its water-power electric plant and will continue construction to completion; is now generating 2000 horsepower to be ready for transmission by January 1. Plant is located on Reedy river, 10 miles from Laurens. All machinery has been contracted for. J. E. Sirrine of Greenville, S. C., is the engineer in charge and C. R. Willard & Son of Spartanburg, S. C., are the contractors. N. B. Dial of Laurens is president. (Other particulars previously stated.)

Lynchburg, Va.—C. W. Hancock & Sons have contract for construction of stone and concrete dam, 200 feet long and 35 feet high, across Cedar creek on the Natural Bridge property. It is planned to develop about 100 horsepower, which will be used for propelling machinery for manufacturing electric current, by which grounds will be lighted. Plans are also being prepared for erection of bathhouse; C. I. Johnson, Wingina, Va., president of company owning the resort.

Magnolia, Ark.—Standard Ice & Light Co., recently reported incorporated with \$50,000 capital stock, will erect brick building 60x90 feet; cost about \$4000; R. L. Moore, president and treasurer. (See "Machinery Wanted.")

Memphis, Mo.—Iowa-Missouri Traction & Power Co. plans to construct two dams across Des Moines river at Keosauqua, Iowa, and provide water-power equipment and electrical machinery for developing 9000 horsepower, to be transmitted for electric lighting and operating railway. A. W. Carpenter, Box 315, Memphis, Mo., can be addressed. D. Fitzgerald of 80 Wall street, New York, will finance the proposition.

Monroe, Ga.—City contemplates voting on issuance of \$30,000 of electric-light and sewer bonds. Address The Mayor.

Richmond, Va.—City is considering erection of electric plant to generate electric power for use at new water pump-house, and possibly also for lighting streets and parks. Address The Mayor. (See item under "Water-Works.")

San Antonio, Texas.—San Antonio Gas & Electric Co. will soon rebuild its entire arc-lighting system and will install four new arc-light generators to supply current for street-lighting lamps. Since first of year company has undertaken various improvements in its plant on Villita street, including installation of incandescent alternating generator, capable of supplying current for 20,000 incandescent lights, and another generator to furnish power for operation of street cars. Some of the old equipment will be rebuilt and practically all machinery now in use at this station can be used in new plant which company was reported in August as having under consideration. It is expected that the betterments planned will be completed in December.

Shawnee, O. T.—Independent Light & Power Co. incorporated with \$100,000 capital stock by J. W. Rubey, Homer Alexander, Harry Mead and others.

Smithfield, N. C.—City contemplates holding election to vote on bond issue for electric-light plant, water-works and sewer system recently mentioned; F. H. Brooks, member of committee; correspondence with engineers desired. (See "Machinery Wanted" column.)

Thomasville, N. C.—Thomasville Light & Power Co. will erect electric-light plant recently mentioned; will build power-house; cost of buildings and machinery \$30,000; capacity 150 kilowatts; engineer in charge, B. F. W. Bryant, Boston, Mass.; local superintendent, J. Lambeth. (See "Machinery Wanted" column.)

FOUNDRY AND MACHINE PLANTS

Fourche, Ark.—Fourche River Lumber Co. will rebuild structures recently reported burned; will erect roundhouse 30x60 feet and blacksmith and machine shop 30x80 feet; cost of buildings, \$3000; no more machinery needed; engineer, A. J. Mentor; manager, F. H. Hartshorn.

Independence, Mo.—Danielson Implement Co. incorporated with \$100,000 capital stock by W. G. Danielson, S. O. Bennion and V. J. Danielson.

Jonesboro, Ark.—Curtis Manufacturing Co.,

Champaign, Ill., has about completed arrangements for establishment of proposed gasoline-engine plant in Jonesboro. New company will be known as Jonesboro Iron & Engine Works and will succeed Curtis Manufacturing Co. of Champaign, Ill., and Burns Boiler & Machine Works of Jonesboro, the latter plant having been purchased and will be operated until the new building can be erected. R. B. Curtis and Morgan Brooks, Champaign, Ill.; A. W. Hall, J. B. Mason and D. W. Burns of Jonesboro are the incorporators. (Previously mentioned.)

Knoxville, Tenn.—Knoxville Implement & Machinery Co. incorporated with \$10,000 capital stock by B. N. Phillips, A. J. Potts, S. M. Felker and others.

Lake Charles, La.—Cobb Car Co., Ltd., recently incorporated with \$100,000 capital stock, has elected A. Thomson president, B. J. Banker vice-president, D. Z. Thomson secretary-treasurer and B. J. Cobb general manager. Construction work on shops has begun; first building will be 40x100 feet. (Recently mentioned.)

Raleigh, N. C.—Raleigh Star Vending Co. incorporated with \$10,000 capital stock by F. H. Busbee, W. J. Andrews, F. K. Ellington and others to manufacture and operate automatic vending machines.

St. Louis, Mo.—St. Louis Iron and Machine Works incorporated with \$500,000 capital stock by G. H. Timmerman, Herman Krutzsch, Harry F. Ewald and others.

St. Louis, Mo.—Cowell Corn Drill Co. incorporated with \$60,000 capital stock by James C. Sefton, Charles W. Cowell and Bruce Starke.

Wheeling, W. Va.—Wheeling Flexible Ladder Co., recently reported incorporated, has an established plant for manufacturing flexible ladders, fire escapes and wirework; ladder capacity, about 6000 feet per day. J. J. P. O'Brien is secretary-treasurer.

ICE AND COLD-STORAGE PLANTS

Decatur, Texas.—Decatur Ice Co., recently noted organized to establish ice plant, will not build before December or January; contemplates erection of seven and one-half ton plant; architect and engineer not engaged; J. P. Hayter, manager.

Edna, Texas.—It is proposed to establish ice plant and steam laundry combined. L. Dustin can give information. (See "Machinery Wanted.")

Hattiesburg, Miss.—Southern Ice Co. will erect 50-ton ice plant recently mentioned; cost of buildings \$3000; cost of machinery \$24,000; buildings to be of frame, 55x120 feet; plans to be made and work done by company's force; C. E. Neeley, president.

Magnolia, Ark.—Standard Ice & Light Co., recently reported incorporated with \$50,000 capital stock, will erect brick building at cost of about \$4000; R. L. Moore, president and treasurer. (See "Machinery Wanted.")

Monett, Mo.—Monett Electric Light, Power & Ice Co. will erect 1200-ton storage addition recently mentioned; cost \$4000; with addition, plant will have 3000 tons storage capacity; ice plant is being increased to 30 tons capacity; C. W. Copeland, secretary.

Tullahoma, Tenn.—Boyd Bros. contem plate establishment of 12 or 15-ton ice plant.

IRON AND STEEL PLANTS

Oklahoma City, O. T.—Oklahoma City Steel & Iron Works, recently reported incorporated, will establish plant for the manufacture of structural steel and machinery. Buildings will be erected and equipped with machinery; plans not decided; probable cost, \$20,000; H. M. Little, manager. (See "Machinery Wanted.")

LUMBER-MANUFACTURING PLANTS

Alexandria, Va.—Blue Ridge Lumber Co. incorporated with \$15,000 capital stock; Louis C. Barley of Alexandria, president; W. C. Waite, vice-president, and R. T. Green, secretary-treasurer, both of Culpeper, Va.

Artesia (Postoffice at Hallsboro), N. C.—H. C. Buck, Jr., Company will rebuild planing mills and drykilns recently reported burned; capacity to be 20,000 feet daily North Carolina pine. (See "Machinery Wanted.")

Ashboro, N. C.—Genton Lumber Co. incorporated with \$25,000 capital stock by W. C. Hammer and others to conduct lumber plant, etc.

Ashland, Ky.—Anderson Henderson is reported as having purchased timber land and contemplating erection of sawmill.

Big Stone Gap, Va.—W. H. Roberts, Roberts & Kizer Lumber Co., Wise, Va., will establish, it is reported, two sawmills and develop timber lands near Big Stone Gap.

Crimson Springs, W. Va.—Crimson Springs Lumber Co. incorporated with \$100,000 capital stock by F. K. Weikie, L. H. McIlhose, J. A. Trexler and others to develop timber, coal and mineral lands.

Denton, N. C.—Denton Lumber Co. incorporated with \$25,000 capital stock by J. F. Cameron, Arthur Ross, W. J. Miller and others.

Durant, Miss.—A. J. Thornton (of Thornton Bros.) and P. B. Miller, both of Morganfield, Ky., will establish sawmill, shingle mill, woodyard, etc., at Durant. J. W. Jordan of Durant Lumber Co. will be in charge. This company has purchased 1000 acres of timber land in the delta of Holmes county, and contemplates purchasing 1000 acres more in the delta. Logs will be shipped to Durant, where they will be manufactured into lumber and shingles.

Esserville, Va.—Wells Bros. will operate two additional mills in Wise county. Stave mill has already been installed near Lipps, Va.

Hall, Ky.—Martin-Hall Lumber Co. organized by Can C. Martin, Alex Martin, Jr., and John M. Hall with \$25,000 capital stock. Company will soon install mills and develop 10,000 acres of timber land and later build 10 miles of narrow-gauge road to extend developments.

Hettie, W. Va.—Hettie Lumber & Manufacturing Co. organized with \$30,000 capital stock by Gus Hammons, Levi Hammons, B. L. Holly and C. H. Crase.

Hiltons, Va.—W. R. Bevins has repaired damage to his sawmill by recently reported fire. He has both his mills in operation, producing 12,000 feet of lumber per week.

Holly Bluff, Miss.—Wilborg-Hanna Company, operating band-saw mill at Kimball Lake, Miss., with daily capacity of 30,000 feet, for cutting oak and gum, is reported as preparing to duplicate this mill at Holly Bluff.

Humble, Texas.—Bender Bros., Houston, Texas, have purchased timber on 1600 acres of land near Humble and will probably undertake development.

Lawrence County, Tenn.—The W W & A Lumber Co., Laurelville, Ohio, has, it is reported, purchased for development 620 acres of timber land in Lawrence county estimated to cut 5,000,000 feet of lumber.

Little Rock, Ark.—Wagner-Holtschneider Lumber Co. incorporated with \$25,000 capital stock by Edward Holtschneider (president), Henry Wagner and Louis Wagner.

Lufkin, Texas.—H. P. Landis, Beaumont, Texas, interested in Gillican-Vizard Company of New Orleans, La., has arranged for establishment of proposed turpentine plant at Warsaw, near Lufkin, to have capacity of 2000 barrels of turpentine, besides quantities of resin. Company will be known as Louisiana & Texas Turpentine Co., and is preparing to turpentine 35,000 acres of land in Angelina county owned by Lufkin Land & Lumber Co. It is understood that plans are being considered for establishment of another plant. (The Gillican-Vizard Company was reported in August to establish turpentine plant at or near Beaumont, to begin with an installation of seven or eight stills.)

Marshville, N. C.—Marshville Hardwood Co. organized by Dr. M. P. Blair & others.

Memphis, Tenn.—Union Lumber & Manufacturing Co. incorporated with \$30,000 capital stock by W. J. Gambreal, George F. James, George R. Christie, John Magnuson and C. J. Boyte to manufacture lumber.

Meridian, Miss.—Rex Planing Mill Co. incorporated with \$50,000 capital stock by C. L. Gray, R. C. Malone, R. P. Olser, J. G. Daly and others.

Mobile, Ala.—H. H. Wheless, Alden Bridge, La., has purchased for development 10,200 acres of timber land at \$275,000 near Mobile.

Motley (P. O. Henderson), Texas.—Mayfield Lumber Co. will rebuild sawmill recently burned at a loss of \$2000.

Nashville, Tenn.—Central Construction Co., organized by consolidation of the Rock City Lumber Co. and Patrick & Holt, is remodeling the former's planing mill and installing additional machinery, increasing capacity.

New Orleans, La.—Western Naval Stores Co. incorporated with \$50,000 capital stock to manufacture turpentine, pitch, tar, rosin and naval stores, etc.; W. B. Gillican, president; E. A. McCoy, vice-president, and W. E. Payne, secretary-treasurer.

Newton, Texas.—Newton Sawmill Co., recently reported incorporated and to have purchased plant of Newton Lumber Co., will operate sawmill and planer; will purchase engines and from five to seven miles of rails to develop pine lands; will also add electric plant and water-works to lumber plant; H. B. Jackson, president; S. C. Trimble, vice-president; G. M. Sells, secretary and treasurer; D. A. Ford, general manager; E. L. Lester, superintendent. (See "Machinery Wanted" column.)

Norfolk, Va.—Sandy Run Lumber Co., recently organized, has purchased, it is reported, 5000 acres of timber land in Pulaski county and will install sawmills.

Pine Bluff, Ark.—J. W. Sanders is considering rebuilding plant recently reported burned at a loss of \$75,000.

Pollock, La.—Iron Mountain Lumber Co. has contracted for circular-saw mill of 100,000 feet daily capacity and will install steam drykiln manufactured by Standard Drykiln Co., Indianapolis, Ind. It is also expected to build planing mill of 80,000 feet daily capacity after sawmill is in operation, which will probably be in about five months. Company has purchased timber lands of Big Creek Lumber Co., estimated to cut about 500,000,000 feet of long-leaf yellow pine, etc.; J. F. Ball, president; R. L. Ball, vice-president, and J. W. Ball, secretary-treasurer. (Messrs. Ball are also interested in J. F. Ball Lumber Co., Ball, La., mentioned in September as having purchased 60,000 acres of timber land near Pollock and to erect sawmill and commissary building.)

Richmond, Texas.—Chas. L. Patterson contemplates establishment of sawmill; to be located at Richmond or Rosenberg, Texas.

Richmond, Va.—Miller & Miller will rebuild drykiln recently reported burned; building 20x40 feet will be erected at cost of about \$1000; capacity, 10,000 feet lumber per day; J. Clifford Miller, manager.

Spartanburg, S. C.—William A. Lawton, proprietor of Spartanburg Lumber & Manufacturing Co., and Y. J. Boozer have purchased the Rigby Manufacturing Works; plant will be known as the Rigby Manufacturing Co. and be capitalized at \$25,000. Mr. Boozer will be in charge.

St. Louis, Mo.—Arcadia Timber Co. incorporated with \$300,000 capital stock by G. A. Buder, C. E. Buder, Leo S. Rassieur, M. W. Fenerbacher and Benjamin A. Suppon. Company will handle the product from 12,000 acres of timber land in Dunklin county. G. A. Buder will be president and general manager.

Trio (P. O. Centerville), Ala.—C. H. Cleveland will rebuild sawmill recently reported burned. (See "Machinery Wanted.")

Valdosta, Ga.—Valdosta Variety Works incorporated with \$3000 capital stock by J. P. Coffee, P. D. DuBose, E. G. Dickerson and others.

Vilas, Ky.—John P. Craft and Ransom Holbrook will develop timber lands.

Walnut Lake, Ark.—Walnut Lake Cypress Co., E. P. Ladd, president, is building new plant to manufacture walnut timber, which will be equipped with band mill of 3½-foot wheels, 12-inch shotgun feed, steam nigger, etc.; to be erected on concrete foundation; to have capacity of 60,000 feet daily, log scale. Company controls about 100,000,000 feet of timber, and plant is equipped to ship 50 cars per month. Alf Bennett of Alf Bennett Lumber Co. has contracted for entire output. Mill will be in operation by April 1.

Waycross, Ga.—Bailey Manufacturing Co. is installing additional machinery at its mill, increasing capacity from 25,000 to 60,000 feet of lumber daily. Equipment includes gang saw and two 150-horse-power boilers, already installed, and a third boiler soon to be placed. Nearly all equipment is operated by electricity furnished by company's private power plant.

Wilmington, N. C.—Windley Crosstie Co. incorporated with \$10,000 capital stock by Julius Hahn, R. G. Windley and Lewis M. Banting to deal in crossties.

Winchester, Tenn.—Toledo Lumber Co., recently reported incorporated, has not decided definitely on plans of operation; may build sawmills, and, in that case, will probably contract with local builders; principal address, Cowan, Tenn.; W. E. Hodges, manager.

Winnfield, La.—Land, Lumber & Manufacturing Co., C. H. Elliott, president, will rebuild its planing mill, dry sheds and office building reported burned in October at a loss of about \$8000. New plant will be equipped with matcher, molder and resaw.

Womble, Ark.—Bear State Lumber Co. incorporated with \$100,000 capital stock by M. W. Bryant (president), A. Danville, C. C. Trunhill and others.

MINING

Columbia, Tenn.—Reported that Dr. S. C. Long has sold 1000 acres of phosphate lands in Maury county to a Nashville syndicate at \$125,000.

Eldon, Mo.—Eldon Mining & Development Co. incorporated by J. C. Sorenson, J. F. Fair, W. N. Whitenton and others.

Fountain Inn, S. C.—Stock company will be organized to develop gold deposits on 200 acres of land. Dr. George S. Lee can give information.

Franklin, Va.—Ryland Phosphate Corporation incorporated with \$75,000 capital stock; P. D. Camp, president; P. R. Camp, vice-president, and J. M. Camp, secretary-treasurer.

Franklin, Va.—Nelson Mining & Manufacturing Corporation incorporated with \$50,000 capital stock; P. D. Camp, president, and R. C. Camp, vice president.

Granite Mountain, Texas.—Granite Manufacturing Co. incorporated with \$300,000 capital stock by C. H. Brown, Dallas, Texas; G. W. Voires, Forney, Texas, and T. M. Dees, Midlothian, Texas, to develop granite quarries at Granite Mountain.

Inverness, Fla.—A. C. Pheil, St. Petersburg, Fla., has purchased and will develop phosphate lands near Inverness.

Joplin, Mo.—Mary V. Mining Co. incorporated with \$30,000 capital stock by F. T. Boston, W. I. Harrington, H. S. Miller and others.

Joplin, Mo.—Southern Lead & Zinc Co. incorporated with \$30,000 capital stock by Almena E. Whitehouse, William H. Thompson, Warren Burton and others.

Joplin, Mo.—Hickory Grove Mining & Milling Co. incorporated with \$500,000 capital stock by H. Connelly, John Dolan, P. E. Pritchard, Jr., and Jack Comerford.

Marion, Ky.—Keystone Mineral & Mining Co., Sturgis, Ky., Jas. D. Hopewell, president, has leased lead-ore property in Crittenden county to Sunny Brook Lead & Fluorspar Co. for five years; work shaft has been sunk to depth of 200 feet; daily capacity will be about 20 tons fluorspar and lead; located about six miles from Marion. (Recently mentioned under Sturgis, Ky.)

New Orleans, La.—Standard Realty Co., reported incorporated under Miscellaneous Enterprises, includes drilling for oil and mining for salt in its privileges.

Overbrook, I. T.—Ardmore Asphalt, Oil, Gas & Mining Co. has been organized with \$5000 capital stock. It is proposed to first develop asphalt lands and then drill for oil and gas. W. B. Frame is president, J. N. Dyer vice-president and Harrold M. Wallace secretary-treasurer.

Pryor Creek, I. T.—W. L. Mayes is reported to develop zinc-ore deposits.

Webb City, Mo.—Randall Mining Co. incorporated with \$20,000 capital stock by John P. Randall, James C. Coffee, Frank Hamilton and others.

Woodstock, Ala.—Dr. G. B. Crowe, Birmingham, Ala., is reported as to develop iron-ore properties near Woodstock.

Yukon, W. Va.—Hall Mining Co. incorporated with \$40,000 capital stock by H. M. Myers, Bramwell, W. Va.; T. L. Henritze, Middlesboro, Ky.; J. S. and A. P. Gillespie and George P. Hall, all of Tazewell, Va.

MISCELLANEOUS CONSTRUCTION WORK

Cleburne, Texas.—Heating Plant.—City will install central heating plant for school buildings. Contract will be awarded November 14. John L. Cleveland is chairman. (See "Machinery Wanted" column.)

Brownsville, Texas.—Irrigation.—Indiana-Texas Land & Irrigation Co., recently reported incorporated with \$50,000 capital stock by J. C. Phillips of Brownsville; E. F. Rowson, Houston, Texas, and W. N. Pickens and N. Noe, Indianapolis, Ind., will construct canal and undertake the irrigation of lands about seven miles from Brownsville. Contract for ditch and other work has been awarded to Indiana Co-operative Canal Co. of Brownsville.

Lawton, O. T.—Engineering and Construction.—Kirby-Mayfield-Shaw Engineering & Construction Co. incorporated with \$50,000 capital stock by E. R. Kirby, J. N. Mayfield and W. C. Shaw.

Memphis, Tenn.—Steel-concrete Construction.—Weber Steel Concrete Co. organized with capital stock of \$250,000 to contract for construction of steel-concrete chimneys, piers, bridges, warehouses and other structures; Gardner P. Nash of Chicago, Ill., president; R. T. Fant of Memphis, Tenn., vice-president, and B. E. Jarrett of Fort Smith, Ark., secretary-treasurer; offices in Randolph Building, Memphis. This company is a branch of Weber Steel Concrete Chimney Co. of Chicago, Ill.

New Orleans, La.—Filling.—Columbia General Constructing Co. has contract at 65 cents per cubic yard for filling in behind bulkhead erected by Port Commissioners; Charles T. Yenni, president Orleans Levee Board.

Newport, Ark.—Levee Construction.—Levee District No. 2 of Jackson county will expend \$7100 in erection of levee, recently noted, to protect Jacksonport and Newport; engineer in charge, W. A. Bowman; Eugene A. Shaver, secretary.

Oklahoma City, O. T.—Construction Company.—Equitable Construction Co. incorporated with \$25,000 capital stock by R. J. Lawson, S. A. Conklin and G. R. Mesker.

Pine Bluff, Ark.—Heating and Ventilating Plant.—School District of Pine Bluff, S. M. Taylor, president of board, will award contract November 23 for installation of heating and ventilating plant in school building; Fred Wilson, superintendent of construction. (See "Machinery Wanted.")

Washington, D. C.—Chimney.—District of Columbia Paper Manufacturing Co., Potomac and K streets N. W., has awarded contract to Alphons Custodis Chimney Construction Co., Bennett Building, New York city, for construction of chimney 100 feet high and 9.4 feet in diameter at base.

MISCELLANEOUS ENTERPRISES

Andalusia, Ala.—Live-stock.—Shreve-Milligan Live-Stock & Vehicle Co. incorporated with \$10,000 capital stock by J. W. Shreve, A. B. Milligan and W. F. Milligan.

Asheville, N. C.—Printing and Engraving Plant.—Asheville Printing & Engraving Co., recently reported incorporated with \$25,000 capital stock, will continue operating plant of the Asheville Printing & Engraving Co. and install cylinder press, linotype and other equipment; Frank R. Hewitt, president.

Ashland, Ala.—Hardware.—Ashland Hardware Co. incorporated with \$10,000 capital stock by C. S. Phillips, W. B. Harris, A. S. Dell and others.

Atlanta, Texas.—Gas Development.—Sulphur Oil Co., recently noted to have secured 20-year franchise, is capitalized at \$500,000; owns 50,000 acres of land and has leased other land; president, F. M. Green; vice-president, A. H. Sulpes, Douglassville, Texas; secretary-treasurer, L. W. Willis; engineer, W. L. Henning; company is drilling test well.

Attapulgus, Ga.—Tobacco Cultivation.—Lester-Clay Company, W. J. Kelly, president, Jacksonville, Fla., is understood to be contemplating the cultivation of shade tobacco. (See item under "Clayworking Plant.")

Baltimore, Md.—Oils.—Southern Oil Co., Columbia avenue and Baltimore & Ohio Railroad, has been incorporated with capital stock of \$15,000 to deal in burning, naphtha, lubricating, vegetable, animal and fish oils by Charles H. Mahle, Jacob C. Mahle, Rigmil W. Baldwin, R. Legare Webb and Geo. B. Read.

Baltimore, Md.—Coffee-roasting Plant.—C. D. Kenny Company, coffee roasters, 529-524 South Eutaw street, has purchased adjoining lot, 20x75 feet, for future extension of plant.

Baltimore, Md.—Tobacco.—Eastern Tobacco Works incorporated with capital stock of \$25,000 to deal in tobacco, snuff, cigars and cigarettes by John Muller, Charles J. Bachmann, 219 North Fremont avenue; Charles E. Rozier, S. Gordon Hopkins, 2407 Federal street, and Wm. H. Rozier.

Baltimore, Md.—Real Estate.—Emil J. Klemm Company has been incorporated with capital stock of \$20,000 to develop residential section of land in Howard Park by Emil J. Klemm, 1004 North Arlington avenue; J. Hammond Brown, Edward H. Causey and Harry L. Price.

Beaumont, Texas.—Land Improvement.—Oakwood Realty Co. incorporated with \$50,000 capital stock by R. L. Cartwright, R. L. Cartwright, Jr., George C. Greer, C. C. Roberts and Robert Corley.

Beaumont, Texas.—Oil Wells.—Crosby Oil Co. incorporated with \$12,000 capital stock by A. W. Crosby, R. L. Young and C. A. Richardson.

Bluff City, Tenn.—Stone-crushing Plant.—Holston Manufacturing Co. incorporated to engage in the production of crushed stone; capacity, 20 cars daily; three-story concrete and brick building will be erected at cost of \$35,000; cost of machinery, \$30,000; architect, C. M. Peters; engineer, E. A. Luck; W. R. Miller, president and manager; John A. Miller, secretary-treasurer. Company will operate plant by electric power and supply town with lights.

Carnegie, Tenn.—Harry D. Gump has purchased 100 acres of land at \$20,000, which he will divide into residence sites.

Cedar Grove, N. C.—Telephone System.—Orange Telephone Co. incorporated with \$10,000 capital stock by W. R. Roberts, M. W. Arrowood, N. V. Ray and others.

Chandler, O. T.—Cotton Company.—Farmers' Union Cotton Co. incorporated with \$200,000 capital stock by H. F. Powell, J. S. Demings, W. R. Phenix and others.

Charlotte, N. C.—Coffee Mills.—Company has been incorporated with \$25,000 capital stock by R. L. Lance, S. A. Van Every and E. B. Gresham to grind and deal in coffee.

Chattanooga, O. T.—Telephone System.—Comanche Telephone Co. incorporated with \$5000 capital stock by T. E. and F. O. Hubbard, Snyder, O. T., and W. S. White, Mountain Park, O. T.

Clinton, O. T.—Telephone System.—Clinton Mutual Telephone Co. incorporated with \$5000 capital stock by F. A. Wadley, James T. McLin, George A. Mencham and others.

Cumberland, Md.—Laundry.—Cumberland Laundry incorporated with J. F. Eymann, president and treasurer, and C. G. Holzhau, secretary.

Denny, Miss.—Fruit Cultivation, etc.—Gulf Grape Orchard Co. organized with \$500,000 capital stock by J. S. Philstrom to plant 1500 acres in scuppernon grapes, 500 acres in figs, establish \$50,000 cannery and \$25,000 wine factory.

Edna, Texas.—Steam Laundry.—It is proposed to establish steam laundry and ice plant combined. L. Dustin can be addressed for information. (See "Machinery Wanted.")

El Paso, Texas.—Telephone System.—Southwestern Telegraph & Telephone Co., Dallas, Texas, has, through its counsel, W. W. Turney, finally accepted terms of telephone ordinance.

Fernandina, Fla.—Phosphate Elevator.—Seaboard Air Line Railway, E. C. Bagnell, assistant engineer, Jacksonville, Fla., has appropriated \$55,000 and accepted plans prepared by engineers for erection of proposed phosphate elevator to replace structure burned at a loss of \$150,000. Buildings were previously stated to consist of elevator with rocker unloader and 10,000-ton storage bin.

DeWitt, Mo.—Ferry Transportation.—Carroll-Saline Ferry & Transportation Co. incorporated by Otto A. Schroer, W. W. McKinney, E. P. Crispin and others.

Fairmont, N. C.—Cotton Storage.—Fairmont Cotton Storage Co. incorporated with \$25,000 capital stock by B. L. Page, J. F. Parker, R. O. Pitman and others.

Gainesville, Fla.—Land Improvement.—United Land & Development Co. incorporated with \$10,000 capital stock; John W. Blanding, president, and J. S. Shands, secretary.

Galax, Va.—Hardware.—J. C. Matthews & Co. incorporated with \$25,000 capital stock; G. W. Todd, president; W. E. Beamer, secretary-treasurer, and J. C. Matthews, general manager.

Gallatin, Tenn.—Printing and Publishing.—Gallatin Printing & Publishing Co. incorporated with \$3000 capital stock by Edward Albright, D. B. Puryear, J. J. Nalve and others.

Green Forest, Ark.—Telephone System.—Farmers' Union of Carroll County has organized company with \$3000 capital stock to construct telephone system. S. S. Buell is president, E. C. Dooling vice-president, A. M. Webb secretary and E. H. Inman treasurer.

Hattiesburg, Miss.—Drug Company.—Love Drug Co. incorporated with \$20,000 capital stock by Dr. T. E. Ross, Dr. H. L. McKinnon, M. J. Epley and others; offices in the Ross Building.

Houston, Texas.—Elevator.—Mercantile Grain Co. is erecting elevator and warehouse building, to be equipped with machinery to heat horse-feed products. About \$15,000 will be expended; Mr. Weeks, manager.

Humble, Texas.—Oil Wells.—N. C. Townes & Co., Des Moines, Iowa, are reported to develop oil wells on 1600 acres of land near Humble.

Kansas City, Mo.—Elevator.—Kansas City Southern Elevator Co., recently reported incorporated, has purchased the Gulf elevator plant and leased same to Rosenbaum Grain Co. of Kansas City. Capacity of elevator is 60 cars of grain.

Kansas City, Mo.—Publishing.—Home Friend Publishing Co., 1423 Virginia street, incorporated with \$25,000 capital stock to engage in publishing; machinery to cost \$25,000; managers, J. O. Young and E. O. Koch. (See "Machinery Wanted.")

Keyser, W. Va.—Orchard.—Park-Kimmell Orchard Co. incorporated with \$25,000 capital stock by A. V. Park, E. G. Kimmell, H. L. Arnold and others to cultivate fruit.

Little Rock, Ark.—Land Improvement.—Midland Hills Land Co. incorporated with \$154,000 capital stock. Sam W. Reyburn is president, Chris Ledwidge vice-president and Celsus Perrie secretary-treasurer.

Little Rock, Ark.—Land Improvement.—Midland Hills Company incorporated with \$154,000 capital stock. Midland Hills is a suburb of Little Rock, and company proposes to dispose of the land in lots; Sam W. Reyburn, president; Chris Ledwidge, vice-president, and C. P. Perrie, secretary-treasurer.

Louisville, Ky.—Electric Cleaning.—Electric Cleaning Co., 1047 3d street, incorporated to engage in dry-cleaning of garments; will install machinery at cost of \$3000; president, Oscar G. Joseph; vice-president and general manager, Louis Hesch; secretary and treasurer, Edw. E. Joseph.

Meeker, O. T.—Oil and Gas Wells.—Independent Oil & Gas Co. incorporated with \$500,000 capital stock by N. L. Fogle of Meeker; G. W. Brown and J. C. Fruman, Cleveland, O. T., and others.

Memphis, Tenn.—Automobiles.—Cullen-Butler Auto Co. incorporated with \$5000 capital stock by E. E. Ward, H. A. Simms, E. R. Odle and others.

Mission Valley, Texas.—Telephone System.—R. F. Henry, San Antonio, Texas, will construct telephone line between Mission Valley and Nursery, Texas.

Nashville, Tenn.—Land Improvement.—West End Realty Co. will be incorporated with \$185,000 capital stock by W. E. Knox, J. B. Scrymgeour, W. T. Sanders, J. E. Thompson and others. Company has negotiated for property with frontage of 6000 feet near Centennial Park, which it will develop and subdivide, lay streets and walks and install gas and water system.

Nashville, Tenn.—Printing, Lithographing and Engraving Plant.—G. N. Tillman will erect building; three stories and basement; brick and stone; 40x170 feet; heating, lighting and sanitary equipment; cost \$35,000. Plans prepared by C. A. Ferguson. Building will be occupied by a stock company recently organized to operate printing, lithographing and engraving plant.

New Orleans, La.—Oil Wells, etc.—Standard Realty Co. incorporated with \$100,000 capital stock by J. J. Manson, D. J. Manson and Charles J. Manson to deal in and lease lands, drill for oil, mine salt, etc.

New Orleans, La.—Refrigerators and Supplies, etc.—The H. T. Steffee Company, Ltd., incorporated with \$5000 capital stock by James Geary, Harry T. Steffee and Edward J. de Armas, Jr., to deal in cork, bricks, sand, cement and other articles used in construction of refrigerators, ice boxes and cold-storage insulation, to contract for erection of refrigerators, etc.

Norfolk, Va.—Land Improvement.—Home Place Corporation incorporated with \$25,000 capital stock; W. C. Cobbs of Norfolk, president; H. D. Elcheberger, Richmond, Va., vice-president, and E. B. Johnson of Norfolk, secretary-treasurer.

Oklahoma City, O. T.—Development Company.—Pittsburg Development Co. incorporated with \$250,000 capital stock by J. E. Goss, J. M. Goss, Jr., and A. F. Goss.

Oklahoma City, O. T.—Oil Wells.—Collier Consolidated Oil Co. incorporated with \$250,000 capital stock by G. W. Collier, C. H. Devalde, W. T. Carder and others.

Overbrook, I. T.—Oil and Gas Wells.—Ardmore Asphalt, Oil, Gas & Mining Co. has been organized to drill for oil and gas, etc.; W. B. Frame, president. (See item under "Mining.")

Panama City, Fla.—Publishing.—Panama City Publishing Co., recently reported incorporated, is publisher of Panama City Pilot. Building, 25x40 feet, has been erected; cost, with site, \$2500; cost of machinery installed \$2500; G. M. West, president and general manager.

Pembroke, Va.—Ballast Company.—Lantry Ballast Co. incorporated with \$10,000 capital stock by S. Q. Matey, Frank Davidson, Harry J. Lantry and others.

Petersburg, Va.—Laundry.—Sanitary Family Laundry incorporated with \$50,000 capital stock; R. H. Mann, president; B. B. Jones, vice-president, and J. E. Cuthbert, secretary.

Pocahontas, Ark.—Telephone System.—Pocahontas Telephone Co., recently reported incorporated with E. Dalton president, will establish system for present list of 240 subscribers; in addition to telephone service, company will supply electrical wiring and fixtures; G. A. Doris, secretary and manager.

Prescott, Ark.—Land Improvement.—Nevada County Land, Improvement & Mercantile Co. incorporated with \$25,000 capital stock by J. T. Green (president), J. A. Burton, Robert C. Mast and others.

Reidsville, N. C.—Land Improvement.—Highlands Realty & Improvement Co. has perfected organization, with Fred A. Silver, Greensboro, N. C., president; P. W. Glidewell, vice-president, and John D. Hudlues, secretary-treasurer.

Richmond, Va.—Automobiles.—Broad Street Auto Exchange incorporated with \$15,000 capital stock; W. Wilkinson, president; H. L. Roberts, vice-president, and J. G. Nelson, secretary-treasurer.

Richmond, Va.—Plumbing.—The J. G. Dombrower Corporation incorporated with \$10,000 capital stock; J. G. Dombrower, president; H. C. Brauer, vice-president, and Z. W. Brauer, secretary-treasurer.

Russellville, Ark.—Gas, Oil, etc.—Russellville Gas, Oil & Mineral Co., recently reported incorporated, has leased about 10,000 acres of land and will prospect for gas and oil or artesian water; has leased derrick and drilling machinery; president, Wm. Brooks; vice-president, J. F. Sauerman; secretary, J. A. Livingston; treasurer, H. W. Ferguson.

Salisbury, N. C.—Tannery.—J. R. Nicholas, George H. Shaver and others will establish tannery with daily capacity of 200 hides. D. A. Goodman will be in charge.

Seranton, Miss.—Coal Chutes.—Farnsworth Towboat & Coal Co., recently noted to have awarded contract to Wimot Machinery Co., New Orleans, La., for construction of coal chutes, will expend about \$15,000 in erection of same; John J. Clark, manager.

Sheffield, Ala.—Land Improvement.—Easton Land Co. incorporated with \$10,000 capital stock; James C. Harris, Nashville, Tenn., president; W. S. Hatch, vice-president, and E. A. Robertson, secretary and general manager, both of Sheffield.

Sherman, Texas.—Hardware.—Holliday-Lair Hardware Co. incorporated with \$15,000 capital stock by J. J. Holliday, A. L. Lair and H. A. Holliday.

Snow Camp, N. C.—Telephone System.—Southern Alumina Telephone Co. incorporated with \$4000 capital stock by Nathan C. Stuart, Eula L. Dixon, John R. Stuart and Wake F. Isley.

Suffolk, Va.—Ham Curing.—Virginia Ham Curing Co. incorporated with \$25,000 capital stock; J. M. Darden, president, and W. H. Darden, secretary-treasurer.

Sykesville, Md.—Land Improvement.—Sykesville Realty & Investment Co. has been organized with \$25,000 capital stock by Edwin M. Mellor, Louis H. Schultz, James H. George and others.

Trezevant, Tenn.—Telephone System.—Home Telephone Co. organized to construct telephone system.

St. Louis, Mo.—Publishing.—Canterbury Press incorporated by Frederick E. Bryan, Henry E. Wiese and John Roth.

St. Louis, Mo.—Publishing.—Brief Publishing Co. incorporated by Walter B. Woodward, Louis B. Woodward and Robert Buchanan.

St. Louis, Mo.—L. C. Irvine is reported as planning the organization of a company to establish a barge line for freighting between St. Louis and New Orleans. It is understood that arrangements have been completed whereby a \$1,000,000 company will finance the proposition.

Tampa, Fla.—Crematory.—City Council will probably authorize \$23,000 for crematory improvements. Election will be held December 10; W. H. Freck, Mayor.

Wheeling, W. Va.—Oil and Gas Wells.—Henderson Oil & Gas Co. incorporated with \$25,000 capital stock by John Handlan, Joseph Handlan, Alonzo A. Rust and others.

Wilson, N. C.—Publishing.—Wilson Publishing Co. incorporated with capital stock of \$25,000; will publish daily and weekly paper; president, O. P. Dickin; secretary, A. B. Carrall; editor, J. O. Foy. (See "Machinery Wanted" column.)

MISCELLANEOUS MANUFACTURING PLANTS

Amarillo, Texas.—Bakery.—Electric Bakery Co. incorporated by M. R. Dick, W. P. Bradshaw, Charles L. Green and others.

Americus, Ga.—Fertilizer Factory.—Company has been organized by L. G. Council and Frank and Thomas Harold of Americus and the Home Mixture Guano Co., Columbus, Ga., to establish a home-mixture fertilizer factory at Americus, investing about \$50,000. Company will not erect a building at present.

Atlanta, Ga.—Bottling Works.—Wiley Manufacturing Co. has leased warehouse, which it will use as factory for the Kola-Ade Company, incorporated for the manufacture of a beverage. Latter company is controlled by the Wiley Manufacturing Co., with R. M. Wiley, president.

Beaumont, Texas.—Lubricating Oil.—Florentine Manufacturing Co. incorporated with \$5000 capital stock to manufacture and sell lubricating oil and its various by-products from crude petroleum by Martin Weiss and E. and J. Szafir.

Bristol, Tenn.-Va. - Paper-box Factory. - Establishment of paper-box factory is contemplated. J. B. Peters, secretary Board of Trade, may be addressed. (See "Machinery Wanted.")

Cambridge, Md.-Gas Plant.-Company organized by Emerson C. Harrington, W. F. Applegarth, John G. Mills, W. Lake Robinson and James C. Leonard, all of Cambridge; A. A. Barr, Mount Carmel, Pa., and others, has purchased the Cambridge gas plant.

Campobello, S. C.-Cottonseed-oil Mill.-Campobello Oil Mill has installed following machinery: Westinghouse generator and 40-kilowatt motor, and 125-horse-power Harris Corliss engine.

Chester, S. C.-Fertilizing Plant.-Swift & Co., Chicago, Ill., and Atlanta, Ga., will erect large fertilizer plant; cost, about \$300,000; capacity, 10,000 tons; work to commence at once. (Mentioned in August.)

Columbus, Ga.-Mattress Factory.-Columbus Hygienic Mattress Manufacturing Co. contemplates building new mattress factory.

Denny, Miss.-Cannery and Winery.-Gulf Grape Orchard Co. will establish \$50,000 cannery and \$25,000 wine factory. (See item under "Miscellaneous Enterprises.")

Elkins, W. Va.-Furniture Company.-Randolph Furniture & Undertaking Co. incorporated with \$25,000 capital stock by B. M. Hoover, R. H. Farrell, W. L. Stalnaker and others to deal in furniture, etc.

Fruitthurst, Ala.-Iron-bed Plant.-Fruitthurst Manufacturing Co., recently reported incorporated under Birmingham, Ala., contemplates establishment of plant for the manufacture of iron beds; A. H. Andrew, president and treasurer; F. A. Carver, vice-president and secretary; F. L. Grant, general manager. (See "Machinery Wanted.")

Gainesville, Ga.-Gas Plant.-Charlton G. Ogburn, Atlanta, Ga., representing Savannah capitalists, is endeavoring to organize company to furnish Gainesville with gas.

Gillette, Ark.-Creamery.-C. Andrews, agent for L. C. Cutler, assisted by A. H. France, O. P. Maxwell and others, are interested in establishment of creamery at a cost of \$4200.

Greensboro, N. C.-Asbestos Products.-Carolina Asbestos Manufacturing Co. incorporated with \$20,000 capital stock; will manufacture asbestos products and roofing; president, R. G. Glenn; secretary-treasurer, R. G. Sloan.

Havre de Grace, Md.-Gas Works.-Havre de Grace Gas Co. incorporated to establish plant for manufacturing water gas for lighting, cooking and heating purposes. Work is expected to begin about November 15; Dr. R. H. Smith, president; Francis I. Jones, vice-president, and Walter W. Hess, secretary-treasurer. (Company was recently mentioned as having secured franchise.)

Hickory, S. C.-Cottonseed-oil Mill.-W. S. Wilkerson is interested in contemplated establishment of cottonseed-oil mill.

Houston, Texas.-Chemical Works.-Southern Chemical Co., R. E. Young, manager, contemplates enlarging its plant and laboratory, increasing capacity.

Kansas City, Mo.-Spectacle Factory.-Tru-sight Spectacle Co. incorporated with \$10,000 capital stock by B. H. Ingels, E. O. Koch, W. M. Ross and others.

Macon, Ga.-Bottling Works.-Beddingfield-Fleischer Company incorporated with \$15,000 capital stock by William Beddingfield, Julius L. Fleischer and Ernest W. Lipford.

Montgomery, Ala.-Safety Appliance.-Andrew Railway Safety Appliance Co. incorporated with \$2,500,000 capital stock to take over company of same title, manufacturing the Andrew airbrake device to prevent derailment of railroad trains, broken axles and trucks; James T. Andrew, president; E. R. Taber, vice-president; W. H. Hubbard, treasurer; E. F. Higgins, secretary, and George W. Jones, general counsel. (Company was mentioned in September as having increased capital stock from \$100,000 to \$2,500,000 and to enlarge plant.)

Nashville, Tenn.-Whiting Manufacturing. Import Whiting & Manufacturing Co., recently reported incorporated, will engage in the production of refined whiting; capacity, 20 to 35 tons per day; machinery ready; W. Nash Read, president and treasurer.

Nashville, Tenn.-Candy Factory.-Hugh Buchanan Candy Co. will be incorporated with \$10,000 capital stock to establish candy factory; Hugh Buchanan, president, and O. P. Hampton, secretary-treasurer.

Newbern, N. C.-Bottling Works.-Pep-Tono Co., recently reported incorporated with \$100,000 capital stock to manufacture and bottle beverages, has elected F. S. Duffy president and H. M. Crowson secretary-treasurer.

Newbern, N. C.-Agricultural Fertilizers.-Chemical Lime Co. incorporated with \$150,000 capital stock to manufacture lime and fertilizers by F. M. Simmons, C. D. Bradham, J. D. Farrior and L. I. Moore.

New Orleans, La.-Turpentine Cups.-Mc-Koy Turpentine Cup Co. incorporated with \$100,000 capital stock by E. A. McKoy, W. B. Gillican and A. Vizard, Jr., to manufacture turpentine cups.

New Orleans, La.-Creamery.-St. Tammany Dairy Co. incorporated with \$100,000 capital stock to establish dairy; Otto F. Briede, president; Eugene L. Burgunder, Jr., vice-president; William Renaudin, secretary-treasurer, and J. D'Arcy Hotchkiss, manager; temporary headquarters, 407 Hennen Building.

Norfolk, Va.-Medicine Factory.-White Horse Medicine Co. incorporated with \$500,000 capital stock; Dr. F. E. White, president and treasurer, and Daniel Coleman, secretary.

Oklahoma City, O. T.-Billiard Covers.-J. M. Stivers of Oklahoma City and A. J. Watson, Linn Creek, Mo., will establish plant for manufacturing automatic billiard covers invented by Mr. Stivers.

Paducah, Ky.-Cannery.-Canning company, of which Adolph Weil is secretary, contemplates establishing plant in Tennessee; details not yet stated.

Palmyra, Ark.-Grist Mill.-Farmers' Union Gin Co. incorporated to establish cotton gin and grist mill; building 60x80 feet will be erected at cost of \$500; cost of machinery, \$2435; capacity of grist mill, from 50 to 100 bushels corn per week; J. B. Moran, engineer; manager, I. S. Owen; president, W. L. Thomasson.

Pawhuska, O. T.-Grist and Flour Mills and Elevator.-Pawhuska Mill & Elevator Co. is erecting grist mill and 11,000-bushel grain elevator. Later it is proposed to build flour mill.

Rogers, Ark.-Cannery.-Nelson Canning Co. incorporated with \$10,000 capital stock by A. M. Ireland, Roy Nelson and B. J. Julian.

Shreveport, La.-Fertilizer Factory.-Consumers' Fertilizer Co., J. J. Green, president, recently reported incorporated, will establish commercial fertilizer factory of 200 tons capacity; cost of buildings and machinery, \$10,000.

St. Louis, Mo.-Chemical Plant.-Charles E. Lane, Pfeiffer Chemical Co., has leased site 44x125 feet and will erect building.

St. Louis, Mo.-Musical Instruments.-The Aeolian Company incorporated with \$100,000 capital stock by William C. Mansfield, Gabriel P. Benjamin and Albert Arnstein to manufacture and deal in musical instruments, etc.

St. Louis, Mo.-Shoe Factory.-Peters Shoe Co., Henry W. Peters, president, will consider December 16 an increase in capital stock from \$1,250,000 to \$1,750,000.

St. Louis, Mo.-Drug Factory.-William Craemer Drug Co. incorporated with \$50,000 capital stock by William F. Craemer, William F. G. Craemer, Carl W. Craemer and others.

Van Buren, Ark.-Cannery.-A. Bird, Bentonville, Ark., will establish canning factory.

Williamson, N. C.-Peanut Factory.-Virginia-Carolina Peanut Co. incorporated with \$100,000 capital stock by Joseph G. Godard, James G. Staten, John R. Mobley and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Roanoke, Va.-Norfolk & Western Railway, C. S. Churchill, chief engineer, Roanoke, will soon award contract for erection of repair shops. John P. Pettyjohn, Lynchburg, Va., and T. W. Kirkbride of Roanoke and Bluefield, W. Va., have submitted bids.

ROAD AND STREET IMPROVEMENTS

Atlanta, Ga.-City will repave about 13,000 square yards on Broad street with creosote blocks. Contract will be awarded November 18; W. J. Campbell, City Clerk; R. M. Clayton, City Engineer. (See "Machinery Wanted" column.)

Bellevue (P. O. at Newport), Ky.-City contemplates issuing \$30,000 of bonds for repaving Fairfield avenue. Address The Mayor.

Evergreen, Ala.-Conecuh county has voted \$100,000 of bonds for road improvements. Address County Commissioners.

Fayetteville, Tenn.-City will advertise for bids January, 1908, for construction of concrete pavements recently mentioned; Walter G. Kirkpatrick, Jackson, Miss., engineer in charge; J. E. Polndexter, City Clerk.

Greenwood, S. C.-Frank Barker, Savannah, Ga., has contract to pave 3000 square yards of sidewalk at Greenwood. (Recently mentioned without address of Mr. Barker.)

St. Augustine, Fla.-City Council has rescinded recent action for paving San Marco avenue with vitrified brick by the city, and decided to have the work done by contract. Clerk has been instructed to ascertain if bids submitted October 8 will be adhered to, and successful bidder will then be named; M. G. Carrera, City Clerk. (Recently mentioned.)

Tampa, Fla.-City Council will probably authorize \$89,500 of bonds for additional street paving. Election will be held December 10; W. H. Frecker, Mayor.

Waycross, Ga.-City will vote December 3 on issuance of \$40,000 of bonds for paving. Address The Mayor.

Winston-Salem, N. C.-Jewelry Plant.-Bailey Jewelry Co. incorporated with \$25,000 capital stock by M. D. Bailey, Jr., J. E. Kavanaugh and D. R. Burton to manufacture and retail jewelry, etc.

SEWER CONSTRUCTION

Chattanooga, Tenn.-Guld & Co., recently noted to have contract for construction of storm-water sewer on Chestnut street, will build 5000 feet brick sewer from 54x66 to 63x94½; egg-shaped; cost \$62,000; Robert Hooke, City Engineer.

Florence, S. C.-City has accepted proposition of William W. Lyon, civil and sanitary engineer, Sumter, S. C., to make survey of city and furnish plans and estimates of cost of installing sewer system. (City mentioned in September as contemplating issuing \$75,000 of bonds for construction of sewer system.)

Monroe, Ga.-City contemplates voting on issuance of \$30,000 of sewer and electric-light bonds. Address The Mayor.

Mount Olive, N. C.-City is contemplating construction of sewer system in connection with establishment of water-works, for which \$35,000 of bonds were recently voted; A. S. Brady, Mayor.

Smithfield, N. C.-City contemplates voting on bond issue for electric-light plant, water-works and sewer system recently mentioned; correspondence with engineers desired; F. H. Brooks, member of committee. (See "Machinery Wanted" column.)

Stillwater, O. T.-City will vote December 3 on issuance of \$60,000 of water-works extension and sewer bonds. Address The Mayor.

Tampa, Fla.-City Council will probably authorize \$50,000 for construction of storm and sanitary sewers. Election will be held December 10; W. H. Frecker, Mayor. (Recently mentioned.)

Waycross, Ga.-City will vote December 3 on issuance of \$10,000 of bonds for sewerage extensions. Address The Mayor.

Yorkville, S. C.-City will vote November 20 on issuance of \$25,000 of bonds for construction of sewerage system and extension of water-works; engineer not selected; Col. W. W. Lewis, town attorney, should be addressed. (City recently mentioned as having employed Wilson, Sompayrac & Urhart to make preliminary survey relative to construction of sewer system estimated to cost about \$20,000.)

TEXTILE MILLS

Anderson, S. C.-Conneross Yarn Mill, lately reported incorporated, is capitalized at \$60,000, and A. S. Farmer, W. H. French, H. T. French, Furman Smith, T. B. Earle and Robert P. Hooper are the directors. Will take over and operate 800-spindle plant of Anderson Phosphate & Oil Co. Mr. Farmer is president and treasurer, W. H. French vice-president and Mr. Earle secretary.

Blackburg, S. C.-G. Lang Anderson of Williamston, S. C., is reported as organizing \$250,000 company to build cotton mill at Blackburg.

Burlington, N. C.-L. Straus is reported as to establish a plant for manufacturing felt from waste and trimmings of cotton-spinning and hosiery-knitting mills.

Denton, N. C.-Denton Cotton Mills Co., lately reported incorporated, has purchased site and is planning to begin construction of its proposed 5000-spindle cotton-yarn mill; Berry Davidson of Gibsonville, N. C.; J. W. Noel of Lexington, N. C., and J. A. Noel of Roxboro, N. C., incorporators.

East Monbo (postoffice at Monbo), N. C.-Turner Mills Co. has awarded contract to Saco & Pettie Machine Works of Newton Upper Falls, Mass., through A. H. Washburn of Charlotte, N. C., for 7616 spindles, 3800 spindles for ply yarns, Denn warper, Foster cone winder and other machinery to

equip plant. Organization of company, contracts for dam and other details were reported recently. C. H. Lester is superintendent of construction at East Monbo. W. D. Turner of Statesville, N. C., is president.

Flat Rock, N. C.-Skyland Hosiery Co., reported in September and August, has begun construction of mill building and decided to install 200 knitting machines, with complement of ribbers, loopers, etc., to begin with. Company is also erecting other buildings and establishing mill village, and will employ 150 operatives at the start; daily output, 1000 dozen pairs men's fine hose, to be eventually increased to 3000 dozen pairs; J. F. Wilcox, president; F. S. Wilcox, vice-president; H. E. Stillwell, treasurer; C. P. Rogers, superintendent, at Flat Rock.

Griffin, Ga.-Cherokee Mills will immediately begin erection of building and has decided equipment will be 10,000 ring spindles and looms to match. Company will employ foreman and build by day labor. Contract has been awarded for machinery. This company lately noted organized, etc., with capital stock of \$200,000. J. J. Mangham is president.

Hillsboro, N. C.-Eno Cotton Mills has about completed construction of dyehouse and finishing building, 75x300 feet, and is receiving the equipment of machinery; 232 looms and preparatory machinery have been added. All contracts have been awarded.

Newberry, S. C.-Edward R. Hipp is reported as having purchased 100 acres of land as site for cotton mill, to build which a company will be organized.

Newberry, S. C.-Highland Cotton Mills incorporated with capital stock of \$300,000 to build cotton mill by F. N. Martin, George S. Mower, W. C. Houseal and others. Messrs. Martin and Mower were reported recently as purchasing land near Newberry as site for mill.

Savannah, Ga.-Savannah Cotton Mills is reported as to install 200 knitting machines for hosiery production; equipment said to have been purchased.

Senola, Ga.-It is proposed to organize company with capital stock of \$100,000 to build cotton-spinning mill. H. P. Redwine is interested.

Union, S. C.-Mishna Cotton Mills, recently reported incorporated, will soon hold stockholders' meeting to organize and perfect plans for plant; proposed equipment, 15,000 spindles and 450 looms for manufacturing fancy cottons and lawns; capital stock, \$300,000. L. M. Jordan can be addressed for the present.

Wilson, N. C.-Wilson Grocery Co. is interested in plan to install machinery for manufacturing cotton wadding from linters and dyeing and sizing the output. Company is ready to buy the machinery. (See "Machinery Wanted.")

WATER-WORKS

Atlanta, Ga.-Board of Water Commissioners and sub-committee of joint committee from Council will recommend acceptance of bid of New York Continental Jewell Filtration Co. (main offices 15 Broad street, New York) at \$26,000 for installation of eight horizontal filters at Hemphill Station, each to have daily capacity of 500,000 gallons, or a combined capacity of 4,000,000 gallons, duplicating present filter plant. Company was previously reported as having been awarded contract at \$30,000 for installation of filter plant, but board decided later to reject all bids and advertise for new ones, which were opened October 23. Modifications have been made which enabled company to reduce former bid; Frank P. Rice, president of Water Board; R. M. Clayton, City Engineer.

Clisco, Texas.-City has voted \$16,000 of bonds for improvements to water-works. Address The Mayor.

Fort Worth, Texas.-City Water Commission has purchased 1000 acres of land at \$50,000 for maintenance of reservoir. It is proposed to build dam, and water from the river will be used in a duplicate set of mains to flush streets and sewers and extinguish fires.

Hamlet, N. C.-W. R. Bonsal and J. M. Jamison are promoting establishment of water-works and have leased tract of land (about three miles from Hamlet) through which flows stream of water, which, with several wells, will supply city with water for manufacturing and domestic purposes and the Seaboard Air Line Railway, which they contract to furnish with water.

Headland, Ala.-City will vote December 1 on issuance of \$23,500 of bonds for construction of water-works and electric-light plant. Address The Mayor. (See item under "Electric-light and Power Plants.")

Kings Mountain, N. C.—City has engaged engineer and begun construction of proposed water-works. At present nine wells have been drilled on an elevation of 70 feet above town level, which will have a capacity of 250,000 gallons of water daily. (City was previously reported as having voted \$50,000 of bonds for construction of water-works and other municipal improvements.) Address The Mayor.

Madison, Ga.—City water-works, for which bonds were lately reported voted, is now in course of construction. Recent bond issue takes place of former bond issue, which was void. (Construction of water-works, sewerage and electric-light plant fully described in May.) Paul E. Castleberry is resident engineer.

Mount Olive, N. C.—City has voted \$35,000 for construction of water-works; possibly sewer construction also included; plans not decided; engineer not engaged; N. N. Royall may be addressed relative to plans; Mayor, A. S. Grady. (See "Machinery Wanted" column.)

Mount Washington, Md.—Mount Washington Artesian Water Co., Edward L. Gernand, president, has secured franchise to lay water mains from artesian wells near Rogers Station to Mount Washington, a distance of about nine miles. (Recently mentioned.)

Richmond, Va.—City contemplates increasing facilities of new pumphouse, and E. T. Bolling, superintendent of water department, has recommended that \$179,000 be appropriated at once for installation of additional pumps. Council is now considering erection of electric plant to generate electric power for use at new pumphouse, and possibly also for lighting streets and parks.

Smithfield, N. C.—City contemplates voting on bond issue for electric-light plant, water-works and sewer system recently mentioned; F. H. Brooks, member of committee; bids wanted on plans. (See "Machinery Wanted.")

Stillwater, O. T.—City will vote December 3 on issuance of \$60,000 of water-works extension and sewer bonds. Address The Mayor.

Tegucigalpa, Honduras.—City contemplates voting within 30 days on issue of \$50,000 of bonds for water-works; Mayor, W. R. Boyd, Jr. (Recently mentioned.)

Waycross, Ga.—City will vote December 3 on issuance of \$20,000 of bonds for water extensions. Address The Mayor.

Yorkville, S. C.—City will vote November 20 on issuance of \$25,000 of bonds for extension of water-works and construction of sewer system; engineer not selected. Col. W. W. Lewis, town attorney, should be addressed.

WOODWORKING PLANTS

Andalusia, Ala.—Shreve-Milligan Live Stock & Vehicle Co., incorporated with \$10,000 capital stock by J. W. Shreve, S. B. Milligan and W. F. Milligan.

Biltmore, N. C.—Furniture Factory.—U. S. Furniture Manufacturing Co., Lenoir, N. C., J. M. Chiles, president, will erect at cost of \$23,000 buildings recently mentioned; sizes, 26x120 feet and 120x120 feet; plans by R. L. Smith; contractor, Mr. Fisher; principal address, after December 15, Asheville, N. C. (Noted recently and in September under Miscellaneous Enterprises.)

Clarksburg, W. Va.—Ransel Johnson has purchased the Clarksburg Chair Works and will install sash factory.

Fort Worth, Texas.—American Casket Manufacturing Co. is title of company recently noted to establish factory for the manufacture of caskets, coffins, etc.; several buildings will be erected; main building three stories, 60x100 feet; two one-story building 22x60 feet; power-house 40x60 feet; 20-foot dynamo-house; cost of buildings \$30,000; cost of machinery \$30,000; architect, B. A. Mueller, East St. Louis, Ill.; J. H. Ballard, manager and engineer in charge. (See "Machinery Wanted" column.)

Fruitthurst, Ala.—Fruitthurst Manufacturing Co., recently noted incorporated (under Birmingham) and to have taken over planing mill and excelsior properties, will manufacture frame building material, spring bed and cot material, V roofing strips, pine excelsior, etc. Company owns and controls several sawmills, and is contemplating establishment of iron-bed plant; president and treasurer, A. H. Andrew; vice-president and secretary, F. A. Carver; general manager, F. L. Grant. (See item under "Miscellaneous Manufacturing Plants.")

Galax, Va.—Galax Furniture Co. will rebuild plant recently reported burned.

Gulfport, Miss.—Gulfport Furniture Co., incorporated with \$25,000 capital stock by J. S. Richardson, R. L. Glass, Nettie W. Glass, Waldemar Alston and others.

Henderson, Ky.—Commercial Club has arranged for establishment of woodworking plant.

Kansas City, Mo.—Palmer Chair & Furniture Co., P. C. Palmer, president, Buffalo, N. Y., is reported to establish plant in Kansas City for manufacturing chairs and surgical and dental furniture.

Montgomery, Ala.—Leslie L. Gilbert has purchased the Montgomery Trunk Factory, has increased facilities and equipment and removed plant to 218 Dexter avenue.

Nashville, Tenn.—Nashville Hardwood Flooring Co. will install new machinery and make other improvements to its plant in West Nashville.

Pikeville, Ky.—E. A. Venable will establish two stave mills in Pike county for the development of timber lands.

Rome, Ga.—Etowah Vehicle Manufacturing Co. will be incorporated to manufacture all kinds of vehicles and conduct general repairing plant; J. W. Hancock, president, and W. A. McCormack, vice-president and general manager. (Company was recently reported as being organized to manufacture buggies and wagons.)

St. Louis, Mo.—Bayer Bros.' Sash & Door Co., incorporated by Leo J., Frank A. and August V. Bayer, all of St. Louis, and Geo. P. Whittington, Hot Springs, Ark., to manufacture and deal in mill work, office fixtures, etc.

Toccoa, Ga.—Toccoa Furniture Co., recently noted incorporated to establish furniture factory, will erect two buildings, one 60x150 feet and one 60x100 feet; cost of buildings, \$8000 to \$9000; cost of machinery to be installed, \$12,000; architect, E. L. Prater; manager, W. C. Edwards; engineer, Robert V. Hitt. (See "Machinery Wanted.")

Williamston, N. C.—O. B. and O. H. Lay of the Lay & Balcom Manufacturing Co., Port Allegany, Pa., are reported as contemplating erection of plant in Williamston for manufacturing butter dishes.

BURNED

Albemarle, N. C.—Livery stable owned by Miss Sally Blalock and occupied by J. L. Eldred; total loss \$4500. Printing plant of Stanley Enterprise, J. D. Bivins, editor; loss \$7000.

Americus, Ga.—Cullen Horne's cotton gin; loss about \$8000.

Ashland, Ky.—Ashland Tannery Co.'s plant; loss \$20,000.

Brickchurch, Tenn.—Blackburn & Co.'s sawmill.

Camden, Ark.—Quachita Hotel; loss \$50,000.

Centerville, Ala.—C. H. Cleveland's sawmill and cotton gin.

Chattanooga, Tenn.—Henry Tobacco Co.'s tobacco factory; estimated loss \$7500.

Clifton (P. O. Hillsboro), Miss.—J. R. Hinton's sawmill; loss \$8000.

Decatur, Ala.—N. B. Hall & Sons' basket factory; loss \$50,000.

Durant, I. T.—Durant Steam Laundry; loss \$7000.

Eola, Texas.—G. W. Pope's cotton gin.

Fulks Run, Va.—Excelsior Extract Co.'s plant partially destroyed; loss about \$9000; John E. Roller, owner.

Galveston, Ga.—Cotton gineries of W. W. Gordon & Co., Savannah, Ga.; loss between \$15,000 and \$20,000; Adamson & Blake's machine shops; loss \$2000.

Harrisburg, Ark.—Williams Dry Goods Co.'s store building; loss \$7000; C. L. Goring's building, occupied by Harrisburg State Bank and Harrisburg Telephone Co.; loss on structure, \$3000.

Hattiesburg, Miss.—Model Table Co.'s plant; loss \$3000.

Hawkinsville, Ga.—Brown House; loss about \$20,000.

Knoxville, Ala.—W. C. Chiles & Co.'s cotton gin.

Lamothe, La.—Wm. H. Davidson's cotton gin; loss \$5000.

Leesville, La.—Leesville Oil Mill Co.'s cotton gin.

Louisville, Ky.—Elks' Lodge building; loss \$30,000.

Motley (P. O. Henderson), Texas.—Mayfield Lumber Co.'s sawmill; loss \$2000.

Nicholls, Ga.—Farmers & Merchants' Ginning Co.'s cotton gin; G. W. Deen's commissary building.

Reynolds, Ga.—Ruffin & Poole's cotton gin and steam cane mill.

Sheffield, Ala.—King Stove & Range Co.'s stove plant; loss about \$20,000.

Siloam, Ga.—Dalvin & Corry's cotton gin.

Taxahaw, S. C.—Moses & Phillips' cotton gin.

Trilby, Fla.—Berrenger & English's sawmill; loss \$80,000.

Valley Bend, W. Va.—H. C. Dunfee's sawmill.

Wheeling, W. Va.—George McDonald's planing mill; partially destroyed; loss \$15,000.

Wiggins Crossroads, N. C.—John Wiggins' cotton gin; loss about \$4000.

BUILDING NOTES

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

APARTMENT-HOUSES

Kansas City, Mo.—Edgar C. Faris, Shukert Building, is preparing plans for erection of apartment-house; two stories, 80x120 feet; brick and stone.

Kansas City, Mo.—Sam Nigro is having plans prepared by Edgar C. Faris for erection of apartment-house; three stories, 40x45 feet; brick.

Louisville, Ky.—H. J. Scheirick, H. N. Nevin and H. N. Johnson will erect store and apartment-house; seven stories; reinforced concrete skeleton construction; brick exterior; stone trimmings.

Louisville, Ky.—Thomas Cole has had plans prepared by Meyer & Brenner, Keller Building, for erection of store and apartment building; two stories; brick; cost \$5000.

St. Louis, Mo.—Banner Land & Building Co. has had plans prepared by J. M. Dice, 821 Chestnut street, for erection of four apartment-houses; two stories; brick and stone; two buildings to be 27x52 feet and two 25x49 feet; former to cost \$12,000 and latter \$10,000.

St. Louis, Mo.—Enterprise Building Co. has had plans prepared by R. G. Kirsch, Mermod & Jaccard Building, for erection of apartment-house; three stories; brick, stone and terra-cotta.

St. Louis, Mo.—T. V. Cronwell is having plans prepared by A. B. Corwin, 510 Pine street, for erection of double apartment-house; two stories, 35x64 feet; brick and stone.

Washington, D. C.—F. W. Alexander, 301 E street N. W., will erect apartment-house at northwest corner 3d and E streets N. W.; six stories; 45x50 feet; brick with ornamental stone and terra-cotta trimmings; structural iron and steel; fireproof; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator; cost about \$10,000; Matthew G. Lepley, architect, 690 Bond Building.

Washington, D. C.—Leo Simmons, Kellogg Building, will erect two apartment-houses on California avenue, between 18th and 19th streets N. W.; three stories and basement; 50x100 feet each; brick with stone trimmings; interior marble; structural iron and steel; hardwood finish; slag roof; fireproofing over boiler-rooms; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost \$60,000; owner will erect structures by sub-contracts; Merrill T. Vaughn, architect, 627 F street N. W.

CHURCHES

Baltimore, Md.—Sacred Heart R. C. Church, Edward M. Weigel, rector, Canton, will erect new granite church building at northwest corner 3d street and Foster avenue, to cost \$150,000; all modern conveniences and chimes will be installed; Robert C. Ulrich, architect, 1820 North Monroe street.

Baltimore, Md.—Garrett Avenue Methodist Church, U. S. Wright, chairman building committee, 1835 West Lexington street, has awarded contract to A. K. Boteler, 1345 Shields alley, for construction of church building at southwest corner Lexington and Monroe streets; two stories; 54x72 feet; granite exterior; slate roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; J. Franklin Nelker, architect, 1526 Retreat street.

Chattanooga, Tenn.—First Presbyterian Church has not yet let contract for edifice recently noted to be erected; plans by Bearden & Foreman, H. S. Probasen is chairman and W. L. Magill secretary of building committee. (Lately mentioned.)

Dunn, N. C.—Presbyterian congregation, Rev. A. R. McQueen, pastor, will have plans prepared by Hill C. Lathicum, Durham, N. C., for erection of edifice.

Enterprise, Ala.—Baptist congregation has had plans prepared by the LaBelle-Kriss

Company, Title Guarantee Building, Birmingham, Ala., for erection of edifice; pressed brick and stone; Rev. A. G. Mosley, pastor.

Kansas City, Mo.—First Presbyterian congregation has had plans prepared by Wilder & Wight, First National Bank Building, for erection of edifice; 75x98 feet; brick, stone and terra-cotta.

Kansas City, Mo.—Jackson Avenue Christian Congregation, Rev. F. L. Bowen, pastor, has had plans prepared by J. H. Felt, Shukert Building, for erection of edifice; brick and stone; cost \$25,000.

Lagrange, Ga.—Primitive Baptist congregation will erect edifice recently mentioned; cost \$2000; frame building; contract to be awarded to local bidder. J. A. Pike, deacon, may be addressed.

Lake Charles, La.—Baptist congregation will erect edifice 62x106 feet; gray pressed brick; plans prepared by I. C. Carter. Construction work has begun under the supervision of the architect and management of W. H. Robinson.

Latta, S. C.—Reported that Baptist congregation will erect edifice. Address The Pastor, Baptist Church.

Latta, S. C.—Methodist congregation will erect edifice at a cost of about \$12,000. Address The Pastor, Methodist Church.

Lawton, O. T.—First Congregational Church will make improvements to edifice; ordinary frame building, with basement; cost of completed building, \$6000; hot-air heat; electric lighting; bells; parsonage will also be erected at cost of \$1750; plans by Ira G. Jones; pastor, Rev. Oliver B. Loud. (See "Machinery Wanted.")

Nashville, Tenn.—Moore Memorial Baptist congregation will have plans prepared for erection of edifice. Address The Pastor, Moore Memorial Baptist Church.

Runge, Texas.—Bids will be received until November 20 for erection of church building of concrete blocks; plans and specifications on file with D. P. Althart, chairman building committee; usual rights reserved.

Shepherdstown, W. Va.—Baptist congregation, Rev. Mr. Martin, pastor, has had plans prepared by Henry Walters, Board of Trade Building, Louisville, Ky., for erection of two-story edifice.

Sumter, S. C.—First Methodist congregation has adopted plans by A. W. Todd, Charleston, S. C., for erection of edifice; walls of brick and finished with stucco; four stories, each 125 feet high; Gothic style of architecture; main auditorium 80 feet square, with seating capacity of 670; Sunday-school room annex, seating capacity 300; cost about \$35,000.

Tarboro, N. C.—Howard Memorial Presbyterian Church awarded contract to Lee County Building & Construction Co., Sanford, N. C., for erection of proposed edifice; approximate cost \$20,000; stone and pressed brick.

Uvalde, Texas.—Methodist Church has not yet let contract for edifice recently noted to be erected after plans by W. N. Hagy, Riverside Building, San Antonio, Texas; ordinary construction; 74x89 feet; Mission finish; steam heating; electric lighting; cost \$15,000; pastor, C. W. Perkins.

Washington, D. C.—George C. Hough, builder, 1333 G street N. W., will probably be awarded contract for interior alterations and construction of new gallery on iron columns in synagogue of Obey Sholem Congregation; D. Bergarzin, chairman of building committee, 1428 8th street N. W.; Spelden & Spelden, architects, 1405 New York avenue N. Y.

COURTHOUSES

Chatham, Ala.—Southern Structural Steel Co. of San Antonio, Texas, has recently begun construction of courthouse, for which it received contract some months ago, as stated in this column; brick and stone construction; fireproof; 32.6x35.1 feet; hot-air heating plant; slate roof; cost about \$9000. Contractor will use considerable quantities of limestone, terrazzo, marble tile, steel, cement and slate. Company also has contract to build fireproof jail, with slate roof, as previously reported. Plans prepared by W. S. Hull of Jackson, Miss. W. M. Matthews will have charge of construction at Chatham for contractor.

Houston, Miss.—Plans and specifications will be submitted to Board of Supervisors of Chickasaw County November 4 for erection of courthouse, after which bids will be received and contract awarded. Board has ordered a bond issue of \$65,000 for this purpose.

St. Louis, Mo.—Board of Public Works, A. J. O'Reilly, president, is having plans prepared for reconstruction of Four Courts

Building; three stories; stone and brick; gas and electricity; cost \$30,000.

DWELLINGS

Baltimore, Md.—Frank Novak, builder, 800 North Duncan street, will erect 28 two-story brick dwellings with modern conveniences on Baxter street, between Jefferson and Orleans streets, to cost \$20,000.

Birmingham, Ala.—C. H. Nabb is having plans prepared by LaBelle-Krills Company, Title Guarantee Building, for erection of residence; two stories; 54x60 feet; brick and stone.

Carnegie, Tenn.—Harry D. Gump will erect residence.

Charlotte, N. C.—H. M. Wade of the Charlotte Showcase Co. will erect residence.

Elizabethtown, Ky.—B. H. Alvey is having plans prepared by Fred Erhart, Norton Building, Louisville, Ky., for erection of residence; two stories; gas and electricity; cost \$12,000.

Galveston, Texas.—Frank Jones will rebuild cottage recently destroyed by storm.

Galveston, Texas.—W. L. Ratisseau will rebuild residence at 3812 Avenue P, recently destroyed by storm.

Galveston, Texas.—Max Roitsch will rebuild residence recently destroyed by storm.

Guyton, Ga.—J. C. Hearn will erect \$3000 residence after plans by Philip E. Robinson, Savannah, Ga., and Jacksonville, Fla.

Jacksonville, Fla.—J. H. Williams will erect residence; Spanish style; plans by Philip E. Robinson, Savannah, Ga., and Jacksonville, Fla.

New Orleans, La.—Albert Laplace has permit to erect four single cottages at a cost of \$16,000.

Kansas City, Mo.—E. C. Faris is preparing preliminary plans for erection of stone residence.

Lynchburg, Va.—Mrs. Maud M. Walker will erect residence at a cost of \$4000.

Nashville, Tenn.—S. T. Satterwhite will erect residence; one and one-half stories; concrete and concrete veneer; cost about \$4000.

Ocala, Fla.—William N. Camp will erect residence; Melver & MacKay, contractors.

Ocala, Fla.—W. P. Edwards is having plans prepared for erection of residence.

Owensboro, Ky.—H. B. Phillips has had plans prepared by A. Killian for erection of residence; two stories; frame; concrete and brick foundation and basement.

Port Lavaca, Texas.—Ed Melcher will erect two-story residence.

Sandersville, Ga.—Dr. J. H. Evans will erect \$3500 frame residence after plans by Frank R. Happ, Macon, Ga.

Savannah, Ga.—Clarence Connerat will erect bungalow, for which plans are being prepared by Philip E. Robinson of Savannah, Ga., and Jacksonville, Fla.

Savannah, Ga.—E. T. Burdell will erect \$4000 residence after plans by Philip E. Robinson, Savannah, Ga., and Jacksonville, Fla.

Shreveport, La.—E. I. Brown has awarded contract to A. Benoit for erection of two-story frame residence to cost \$5100.

Springfield, Ga.—George M. Brinson's residence, noted in September to be erected after plans by Philip E. Robinson of Savannah, Ga., and Jacksonville, Fla., will be built in California Mission style around tiled fountain court; stucco or brick; tile roof; rooms on suite, with tiled bath and shower; terrace, pergola and formal garden in rear of court; cost of house about \$20,000; stable to be built to correspond with dwelling.

St. Louis, Mo.—R. D. Weakley, Missouri Trust Building, is preparing plans for residence; brick and stone; 40x41 feet; gas and electricity.

St. Louis, Mo.—Herman Mauch, recently reported as to build dwelling, will expend less than \$15,000; may build next year.

Washington, D. C.—Schmidt & Brandt, builders, 53 Quincy place N. W., will erect five three-story brick and stone dwellings with slag and slate roofs and hot-water heating systems at 120-128 W street N. W. to cost \$18,000; George S. Cooper, architect, 1113 G street N. W.

Washington, D. C.—C. C. Smithson, 479½ G street S. W., has awarded contract to W. E. Garner, 623 M street S. W., for construction of two-story brick dwelling with hot-water heating system at 451 G street S. W. to cost \$6000.

Washington, D. C.—W. D. Green, Potomac Savings Bank, 357 M street N. W., has awarded contract to Richard Ough, Friendship Heights, Md., for construction of two-

story brick dwelling with hot-water heating system at 211 Q street N. W. to cost \$6000.

Washington, D. C.—Harry Wardman, builder, 1333 G street N. W., will erect three-story brick dwelling with tile roof, electric wiring and fixtures and hot-water heating system at 2432 Columbia road N. W. to cost \$5000; A. H. Beers, architect, 1333 G street N. W.

Waycross, Ga.—B. J. Smith will erect 10 or 12-room dwelling; plans not yet accepted.

Waycross, Ga.—J. E. Wadley will erect about six residences costing probably \$4000 each.

HOTELS

Fort Worth, Texas.—Winfield Scott awarded contract to Buchanan & Glider for erection of hotel mentioned in May and July; plans by Sanguinet & Staats; four stories; ordinary construction; steam heat; electric lighting; all subcontracts let; cost \$82,000. (Permit to build and other details recently noted.)

Knoxville, Tenn.—William Caswell is having preliminary plans prepared for erection of hotel; four stories; about 75 rooms; private baths. Mr. Caswell is negotiating with Charlton Karnes, owner of Watauga Building, a 125-room structure adjoining, relative to bridging the alley and connecting the two buildings, making a 200-room hotel, 300x125 feet.

Savannah, Ga.—Barney Dub, proprietor of the Screven House, will expend between \$15,000 and \$20,000 in improvements, including addition of about 17 bathrooms, sun parlor with glass windows and doors, etc.; D. C. Zeigler, Columbia, S. C., and H. W. Witcover of Savannah, consulting architects. (Previously mentioned.)

Savannah, Ga.—Pulaski House will be remodeled at cost of about \$20,000; plans by Percy Sugden; contractor, Frank Wollard; building to be 90x150 feet; four floors and basement; ordinary brick; electric lighting; electric elevators proposed; managers, Stubbs & Kean, formerly of the Alabama, Anniston, Ala.

MISCELLANEOUS STRUCTURES

Atlanta, Ga.—Building.—Harry L. Walker will prepare plans for five-story building to be erected on site owned by Dr. A. W. Calhoun and to be occupied by Cable Piano Co., George W. Wilkins, Southern manager, and the Atlanta Conservatory of Music. Structure will contain auditorium.

Baltimore, Md.—Nurses' Home.—Trustees of University of Maryland have awarded contract to Morrow Bros., 218 West Saratoga street, for construction of nurses' home on King street, near Greene street; four stories; brick with stone trimmings; modern conveniences; cost \$30,000. Contract also includes construction of power-house; Sunderland Bros., architects, Ouray Building, Washington, D. C.

Baltimore, Md.—Stable.—Canton Box Co., 2515 Boston street, will erect two-story stable, 30x50 feet, at corner Hudson and Luzerne streets. George Bunneke & Sons, 305 St. Paul street, and H. S. Rippel, 7 Clay street, are estimating on work; J. Appleton Wilson, architect, Law Building.

Chattanooga, Tenn.—Store Building.—Petropal & Antonopoulos, Atlanta, Ga., purchasers of confectionery store of D. V. Keith, will expend about \$15,000 in improvements.

Colorado, Texas.—Skating Rink.—C. W. Simpson will rebuild skating rink recently reported burned; plans not made; architect not engaged. As proposed, building will be one story; 75x100 feet; 16 feet high; three walls; concrete, solid or blocks; two skylights; electric lighting; cost \$4000; will want bids from contractors.

Cuero, Texas.—Business Building.—R. C. Fleck has awarded contract for erection of brick business building to cost about \$9000.

Dallas, Texas.—Science Building.—Baptist Memorial Sanitarium will erect science building; stone, brick and steel; three stories and basement, 55x90 feet; cost \$30,000; C. W. Bulger, architect; J. W. Slaughter Construction Co., contractor.

Dallas, Texas.—Building.—J. A. Ward will erect one-story brick building; 20x60 feet; correspondence with contractors desired.

DeLand, Fla.—Store Building.—W. C. Watts will erect store building.

Forest City, N. C.—Store Building.—Robert King contemplates erecting store building.

Hartford, Ky.—Armory, etc.—Val P. Collins, Paul Jones Building, Louisville, Ky., is preparing plans for building to contain armory, theater, lodge building, etc.; three stories and basement; 50x100 feet; brick.

Galveston, Texas.—Building.—Miss L. Stapp has awarded contract to J. H. Butler for

erection of building to replace structure at 3620 Avenue P, destroyed by storm.

Galveston, Texas.—Store Building.—Camelo Tantilla is reported to rebuild a store building on 36th street and Avenue R, recently destroyed by storm.

Galveston, Texas.—Immigrant Station.—Work will soon begin on proposed Government immigrant landing station at Galveston, to cost about \$200,000, of which \$70,000 is now available. Sleeping accommodations for about 500 will be provided. Foundation, it is understood, will be of concrete and piling. It will also be necessary to do some dredging and build wharves, enabling steamers to pass up and berth for the landing; E. B. Holman, inspector in charge of the Galveston station. (Previously mentioned.)

Hinton, W. Va.—Lodge Building.—Brotherhood of Railway Trainmen will expend \$88,000 in erection of building recently described; building will be supplied with low-pressure steam heat, electric lighting and hydraulic elevator; architect, J. B. Stewart, Huntington, W. Va.; contractors, West Virginia Architects and Builders, Huntington, W. Va. (See "Machinery Wanted.")

Houston, Texas.—Store Building.—J. O. Ross, 1013 Texas avenue, awarded contract to H. H. Yorty for erection of store building recently mentioned; plans by Oliver & Co.; three stories; brick; 100x100 feet; ordinary construction; heating system not decided; gas and electric lighting; passenger elevator and electrical equipment contracted for; cost of building, about \$35,000.

Huntsville, Texas.—Lodge Building.—Bids will be opened November 11 for erection of brick Masonic lodge building; certified check, \$200, payable to Dr. J. W. Thomason; plans and specifications on file in office of Dr. Thomason at Huntsville or of C. H. Page, Jr., & Bro., architects, Austin, Texas; usual rights reserved.

Jacksonville, Fla.—Business Building.—Addition will be made to building occupied by Big Springs Distilling Co. Plans are being prepared by Philip E. Robinson of Savannah, Ga., and Jacksonville, Fla.

Knoxville, Tenn.—Y. M. C. A. Building.—Central Young Men's Christian Association will have plans prepared by Barber, Klutz & Graf for annex to present building; E. H. Scharringhaus, chairman building committee.

Leeds, Mo.—Sanitarium.—Jackson County Society for Treatment of Tuberculosis, Dr. R. I. Cross, president, will build sanitarium to cost \$20,000, city to contribute \$10,000.

Little Rock, Ark.—Home.—Methodist Orphanage, Geo. Thornburgh, president, has not yet engaged architect to prepare plans for erection of building recently noted; probable cost, \$20,000.

Louisville, Ky.—Stable.—Kentucky Wagon Manufacturing Co. is having plans prepared by D. X. Murphy & Bro. for erection of stable; two stories; brick.

Louisville, Ky.—Lodge Building.—Elks' Lodge will rebuild lodge building recently burned at a loss of \$30,000. W. O. Parson, secretary of Lodge No. 8, B. P. O. E., can be addressed.

Lynchburg, Va.—Store Buildings.—A. W. Mosby and H. E. Dewitt awarded contract to J. T. McLaughlin for erection of store building recently mentioned; plans by W. W. Snead; brick building, 50x118 feet; hot-air heating; electric lighting; freight elevator; construction begun; cost \$15,000.

Meadville, Miss.—Store Building.—J. S. Costley will erect store building; brick; two stories; 30x60 feet. Contract has been awarded.

Memphis, Tenn.—Home.—Alsop & Woods, Randolph Building, are preparing plans for the Ella Oliver Refuge House for Women; three stories; brick and stone.

Memphis, Tenn.—Store Building.—William Helm will erect store building at cost of \$26,000; plans by Shaw & Pfell, Tennessee Trust Building; ordinary construction; four stories, with basement; 48x115 feet; hot-air heating; electric lighting; contractor, A. W. Gettinsby, 996 Madison avenue. (Recently mentioned.)

Memphis, Tenn.—Store Building.—Bry-Brock Dry Goods Co. has purchased the Equitable Building, 75x116 feet, at \$163,000, and will either remodel the building or erect entirely new structure. Purchasers have consulted Shaw & Pfell, architects, in regard to plans.

Mineral Wells, Texas.—Pavilion.—Sidney Webb, Bellevue, Texas, will erect pavilion (at the Crazy Well); to be fireproof, 100x200 feet, and cost \$55,000.

Moss Point, Miss.—Store Building.—J. Bounds will erect store building; two stories; 90x70 feet; concrete and steel.

Nashville, Tenn.—Government Building.—

Sealed proposals will be received until November 27 for construction (including heating apparatus, electric conduits and wiring) of new mailing platform and vestibule, and for miscellaneous betterments at United States custom-house and postoffice. Copies of latter may be had at office of custodian at Nashville, or at office of James Knox Taylor, supervising architect, Washington, D. C., where bids will be opened.

Norfolk, Va.—Stores.—Retail Merchants' Corporation, L. W. Tazewell, president, is considering erection of stores or office buildings on site of old building, which may be razed; new building, if erected, to be one-story stores.

Owensboro, Ky.—Business Building.—Peter Verbaas has had plans prepared by C. W. Kimberlin for erection of business building; two stories; concrete and brick; steam heat.

Paris, Mo.—Infirmary.—Monroe county will obtain plans and specifications for erection of infirmary building; brick and stone; cost \$25,000; J. N. Magruder, County Clerk.

Phenix City, Ala., postoffice at Columbus, Ga.—Store Buildings.—Warren Williams has awarded contract to D. F. L. Jones for erection of two store buildings, 34x70 feet and 20x40 feet, respectively; one story; brick; plate-glass fronts; cost \$4000.

Raleigh, N. C.—Hospital.—Addition to State Hospital for Insane, contract for which was recently noted awarded to N. Underwood, Durham, N. C., will be four-story fireproof building 37x155 feet; electric lighting; hand-power elevator; heating and plumbing contracts not let; plans by Barrett & Thomson; chairman State Hospital Board, Chas. A. Webb, Asheville, N. C.

Rule, Texas.—Store Building.—R. C. Lewis, contractor, will erect one-story store building recently mentioned; 25x100 feet; cost of this and another building to be erected by Mr. Lewis for Messrs. Van Cleave & Flowers \$12,000.

Rule, Texas.—Store Building.—Messrs. Van Cleave & Flowers will erect two-story brick building; 50x100 feet; plans by J. Brewer, Haskell, Texas; contractor, R. C. Lewis. (Recently mentioned.)

Salem, Va.—Infirmary.—Baptist Orphanage of Virginia will erect infirmary at a cost of \$7500. Central heating plant to cost \$14,000 has been completed.

St. Augustine, Fla.—Convent.—St. Joseph's Convent will erect annex at a cost of between \$35,000 and \$40,000. Address Rt. Rev. Bishop Kenny, care of St. Joseph's Convent.

St. Louis, Mo.—Stable.—Charles Stockstrom has had plans prepared by E. C. Jansen, Chemical Building, for erection of stable; two stories; 70x33 feet; cost \$15,000.

St. Louis, Mo.—Orphans' Home.—Christian Orphans' Home will erect building at a cost of \$100,000.

St. Louis, Mo.—Business Building.—Charles E. Lane, president of Allan-Pfeiffer Chemical Co. has had plans prepared for erection of building.

Vass, N. C.—Store Building.—Holly Mercantile Building Co. incorporated with \$25,000 capital stock by A. Cameron, W. B. Graham and W. D. Byrd; will erect brick building.

Washington, D. C.—Cement Shed.—District Commissioners Henry B. F. Macfarland, Henry L. West and Jay J. Morrow will receive bids until November 9 for construction of cement shed on D street, between 12th and 14th streets N. W. Plans and specifications can be obtained by applying to room No. 43, District Building.

Washington, D. C.—Store Building.—Herman Gasch, 1326 New York avenue N. W., has awarded contract to W. B. Holtzclaw, 1706 Pennsylvania avenue N. W., for construction of one-story brick-and-iron-front store building, 26x52 feet, at 910-912 9th street N. W. to cost \$5000; Marsh & Peter, architects, 520 13th street N. W.

Washington, D. C.—Store Building.—C. C. Calhoun, 506 Colorado Building, will probably award contract to J. L. Marshall, 614 13th street N. W., for construction of store building at 1106 G street N. W.; five stories; 25x100 feet; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator; B. F. Meyers, architect, Bond Building.

MUNICIPAL BUILDINGS

Elizabeth City, N. C.—Public Building.—Mr. Urkhardt, Norfolk, Va., has submitted plans for proposed public building, to include city hall, market, fire-department headquarters and auditorium. One plan calls for erection of arcade building, 120x80 feet, with market-house on ground floor and auditorium above, and another plan is for

market-house in rear, with justice courtroom, fire department and offices in front, with auditorium above, making the structure about 200 feet long. Definite plans have not been decided. Estimated cost is \$40,000; C. E. Thompson, Mayor. (Recently mentioned.)

Jackson, Miss.—Fire Stations.—City is erecting brick fire station in northern section and will build another brick station in southwestern portion. Address The Mayor.

Lagrange, Ga.—Fire-department Building.—Mr. Hall, City Engineer, has prepared plans and specifications for erection of fire-department building; two stories; brick; 24x30 feet.

Richmond, Va.—Armory.—Grounds and buildings committee has accepted plans by Charles K. Bryant for erection of armory for the Richmond Light Infantry Blues to cost about \$156,000. Plans have been forwarded to Council. First floor will be used as vegetable market, second floor for company rooms and military purposes, and third floor as drill hall, with floor space of 17,040 square feet. In basement will be rifle range, containing 7236 square feet, swimming pool, shower baths, etc.; E. W. Bowles, major.

Tampa, Fla.—Hospital and Prison.—City Council will probably authorize \$245,000 of bonds for city hall and site, \$35,000 for city hospital and \$7500 for prison and stockade. Election will be held December 10; W. H. Frecker, Mayor. (Recently mentioned.)

OFFICE BUILDINGS

Covington, La.—Covington Bank & Trust Co. awarded contract to C. D. Stewart, Baton Rouge, La., for erection of two-story bank building recently mentioned; architects, Drago & Smith, New Orleans, La.; building 47x95 feet; pressed brick and stone; cost \$20,000.

Dallas, Texas.—Traders' Bank & Trust Co. awarded contract to Thomas Beggs for remodeling building recently noted purchased for banking purposes; ordinary construction; electric lighting; modern front; 50x80 feet; H. D. Ardrey, president. (See "Machinery Wanted" column.)

Houston, Texas.—D. H. Burnham & Co., Chicago, Ill., represented in Houston by W. S. Stevens, will revise plans for proposed office building for estate of T. H. Scanlan, making the structure 15 stories high instead of 11 stories as originally intended. Building will be 55x101 feet; three stories of Texas granite, balance of brick and terra-cotta; steel-frame construction; staircase of marble and metal; marble flooring; two electric elevators; hot and cold water; electric lights; fans; steam heat, etc. (Detailed in July.)

Jacksonville, Fla.—Lodge and Office Building.—Building commission of Masonic fraternity of Florida, Elmer E. Haskell, chairman, will open bids December 10 for furnishing materials and performing labor for building Masonic temple and office building according to plans and specifications by L. M. Weathers Company, Memphis, Tenn. Blank forms of bids, specifications and blueprints on file at office of secretary of committee, George L. Drew, 106 Main street, Jacksonville. Certified check \$1000, payable to chairman. Surety company bond for \$40,000, to be executed within 30 days after being notified. Bids must be without interlineations or changes. Bids will be received on several forms of construction, as named in specifications. Bidder must furnish information regarding buildings of fireproof construction erected by him, cost of same, location, etc.; usual rights reserved. (Mentioned in September.)

Lincolnton, N. C.—R. S. Reinhardt will erect office building; three stories; about 60x100 feet; ordinary construction; electric lighting; storeroom on first floor; cost \$12,000 to \$15,000; architect not engaged. (Recently mentioned under "Miscellaneous Structures.")

McEwen, Tenn.—Fate Williams and Dr. Daniel will erect concrete store and office building; two stories; 50-foot frontage.

Montgomery, W. Va.—Montgomery National Bank will soon let contract for erection of bank building recently mentioned; plans by C. G. Rabenstein, Charleston, W. Va.; cost \$9000; hot-water heating; electric and possibly gas lighting. Montgomery National Bank, care of Dr. L. Pritchard, Charleston, W. Va., may be addressed.

Newport News, Va.—Building Company.—Law Building Co. Incorporated with \$60,000 capital stock; J. A. Willett, president; W. H. Kellogg, vice-president, and E. S. Blanton, secretary.

Quincy, Fla.—First National Bank has adopted plans by an architect of Asheville, N. C., for erection of both bank and store

building, with offices above; three stories; bank to have paneled ceilings, walls with marble bases, tiled floors, etc.

Washington, D. C.—A. B. Lacey, Pacific Building, 624 F street N. W., is contemplating erection of eight-story fireproof office building on F street between 6th and 7th streets N. W.; Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Elliott Woods, Superintendent U. S. Capitol Building and Grounds, will receive bids until November 27 for steel framing for roof of office building for U. S. Senate. Plans and specifications can be obtained on deposit of certified check of \$25.

RAILWAY STATIONS

Grand Point (P. O. Breau Bridge), La.—Southern Pacific Railway will use company's force in erection of depot and section-house recently mentioned; materials have been purchased.

SCHOOLS

Bennington, I. T.—Building committee awarded contract to Sam Dane, Durant, I. T., for erection of school building; plans by W. A. Stevens, Durant, I. T.; two stories; concrete; 63x63 feet; cost \$6000. (Mentioned in July.)

Bossier, La.—Bossier Parish School Board will erect school building of brick or concrete, to cost probably \$15,000. Special school tax of one and one-half mills has been voted.

Bristow, Va.—St. Edith's Academy has awarded contract to I. C. Abbott, Brandy, Va., for construction of school building; three stories, 32x96 feet; frame construction with brick-veneer exterior; metal shingles; sanitary plumbing; Spelden & Spelden, architects, 1405 New York avenue N. W., Washington, D. C.

Columbia, S. C.—South Carolina University, Benjamin Sloan, president, has had plans prepared by Gadsden Shand for infirmary recently noted to be erected at cost of \$15,000.

Columbia, Mo.—State University is having plans prepared by Cope & Stewartson, Security Building, St. Louis, Mo., for erection of agricultural building; two stories and basement, 70x245 feet; brick and stone; cost \$150,000.

Centerville, Ala.—City will erect two school buildings at cost of about \$5000 each; plans not made; construction not to begin before next spring; Mayor, S. C. Meigs. (Vote on bond issue recently mentioned.)

Guyton, Ga.—City will erect \$5000 school-house; brick; colonial style; plans by Phillip E. Robinson, Savannah, Ga., and Jacksonville, Fla.

Houston, Texas.—C. H. Winn has contract for erection of school building on McGowan avenue; eight rooms; cost about \$10,000. Construction work has begun. (Previously mentioned.)

Liberty, S. C.—Company has been organized to rebuild on enlarged scale the Liberty Normal School, recently burned; Thomas C. Amick, president.

Lineville, Ala.—City wants plans and specifications, it is reported, for erection of brick or stone school building, for which \$10,000 of bonds have been voted; F. P. Penfield, secretary School Board; R. D. Evans, Mayor.

Livingston, Texas.—City has voted \$23,000 of bonds to purchase site and erect brick school building at a cost of \$20,000. Address The Mayor.

Magnolia, Miss.—Magnolia Cotton Mills, L. L. Lampton, president, will erect building for school and church purposes.

McCurain, I. T.—City has voted \$10,000 of bonds for erection of school building. Address The Mayor.

McCurain, I. T.—City will erect two-story schoolhouse recently mentioned; cost \$4000; stone; 50x60 feet; J. L. Pertie, architect; date for opening bids not set; Frank E. Parke, Mayor. (See "Machinery Wanted.")

Memphis, Tenn.—McKnight & Barker have been awarded contract for erection of two school buildings, for which they were recently reported as being lowest bidders at \$125,472. Structures will be identical in construction, of brick, stone and terra-cotta, 55x155 feet; plans by Alsop & Woods.

Monroeville, Ala.—City has voted \$6000 of bonds to secure location of county high school. Address The Mayor.

Montgomery, Texas.—City has voted \$5000 of school bonds. Address The Mayor.

Pascagoula, Miss.—J. W. W. Grierson, Moss Point, Miss., has contract to erect one-story school building in Lake avenue. Work on foundation has begun.

Portsmouth, Va.—J. N. Harris is lowest bidder at \$11,100 for erection of annex and

installation of heating apparatus in Fifth District school building, Park View; William L. Walker, chairman committee on buildings and supplies, School Board, Portsmouth. (Recently mentioned.)

Tulsa, O. T.—Henry Kendall College will expend about \$100,000 in erection of six buildings, including administration hall, two dormitories, dining hall and residences for the president and dean. (Recently incorrectly noted as located in Oklahoma City.)

Uvalde, Texas.—Uvalde Independent School District will expend about \$36,000 in erection of school building, contract for which was recently noted awarded to Birkner Bros.; 130x130 feet; brick and wood; electric lighting; steam or hot-air heat; plans by A. O. Watson, Austin, Texas. (See "Machinery Wanted.")

Washington, D. C.—District Commissioners Henry B. F. Macfarland, Henry L. West and Jay J. Morrow will receive bids until November 9 for construction of six-room addition to Langdon School at 20th and Franklin streets N. E. Plans and specifications can be obtained by applying to Room No. 43, District Building.

Washington, D. C.—James L. Parsons, 13½ street and Pennsylvania avenue N. W., was lowest bidder for construction of addition to McKinley Manual Training School at 7th street and Rhode Island avenue N. W.; three stories, 53x105 feet; brick with Indiana limestone trimmings; structural iron and steel; reinforced concrete floors; terra-cotta partitions; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$130,000. Electric generating plant, foundry and carpenter shop will be installed in building; L. W. Norris, architect, 808 17th street N. W.

Washington, D. C.—District Commissioners Henry B. F. Macfarland, Henry L. West and Jay J. Morrow will open bids November 9 for construction of eight-room school building at northwest corner 4th and M streets S. E.; two stories; brick with stone trimmings; modern conveniences; Harding & Upman, architects, 729 15th street N. W. Plans and specifications can be obtained by applying to Room 43, District Building.

THEATERS

Fayetteville, N. C.—Lafayette Auditorium Co. has awarded contract to W. Lee Harbin for erection of combined market and opera-house after plans by Wheeler, Runge & Dickey, Charlotte, N. C. (Recently mentioned.)

Knoxville, Tenn.—Knoxville Auditorium Co., incorporated with \$75,000 capital stock, is having plans prepared for erection of proposed auditorium and hippodrome; 300x80 feet; arcade 50x92 feet. Present rink, 150x80 feet, will be extended, giving under one roof the building 80x300 feet; main entrance, 50x92 feet. Work on structure will begin within 30 days, and a similar building to rink will be erected adjoining rink building. The "Old Homestead" will be remodeled as hotel. C. B. Atkin is president, Charles McNabb vice-president and William G. Brownlow secretary-treasurer. Buildings will be erected by the Auditorium Hotel Co. and leased by the Hippodrome Amusement Co. (Previously mentioned.)

Paducah, Ky.—James Collins, Louis Clark, Frank Wagner and others are organizing stock company to erect theater.

WAREHOUSES

Askew, Miss.—Panola County Farmers' Union Cotton Warehouse Co. incorporated with \$5000 capital stock by C. C. Jacob, R. L. Thornton, J. R. Mahon, F. M. Venderberg and others.

Columbia, Miss.—Marion County Union Warehouse & Banking Co. incorporated with \$10,000 capital stock by S. J. Hathorn and S. T. Hood, both of Wilkesburg, Miss.; J. J. Sumrall, Buford, Miss., and others.

Concord, N. C.—R. A. Brown & Sons have contract to erect cotton warehouse 40x100 feet; automatic sprinklers, etc.; cost \$15,000.

Golden (P. O. Iuka), Miss.—Golden Warehouse & Mercantile Co. incorporated with \$10,000 capital stock by J. T. Hall and S. A. Hyram, both of Eastman, Miss., and others.

Harrisburg, Ark.—Polsonett Farmers' Union Warehouse Co. incorporated with \$5000 capital stock by C. M. Thompson (president), R. Bailey, G. A. Henderson, E. Couch and others.

Heidenheimer, Texas.—Little River District Farmers' Union Warehouse Co. incorporated by R. T. Whitley, V. B. Bell, B. F. Wilson and others.

Houston, Texas.—Mercantile Grain Co. is erecting elevator and warehouse building, expending about \$15,000; Mr. Weeks, man-

ager. (See item under "Miscellaneous Enterprises.")

Iuka, Miss.—Farmers' Union Warehouse Co. incorporated with \$5000 capital stock by J. A. Haines, J. T. Castleberry, G. C. Stephens, R. W. Busby and others.

Jemison, Ala.—Farmers' Union Warehouse Co. incorporated with \$4000 capital stock by C. H. Robinson and others.

Lucedale, Miss.—Lucedale Commercial Co. will rebuild warehouse recently reported burned; probably metal building. Work will be given to local contractors.

Moody, Texas.—Farmers' Union Warehouse Co. incorporated by A. S. Moody, A. J. Cantrell, H. C. Moody, G. M. Bewley and others.

Sandersville, Miss.—Sandersville Farmers' Union Warehouse Co., recently reported incorporated, will build warehouse 64x96 feet; corrugated iron; cost \$1750; architect and contractor, J. H. Myers, Houston, Texas.

St. Louis, Mo.—J. B. Legg, Missouri Trust Building, will prepare plans for storage warehouse; six stories, 74x102 feet; cost \$100,000.

Utica, Miss.—Cotton Growers' Warehouse Co. incorporated with \$20,000 capital stock by F. M. Coleman, E. T. Jacob, S. B. Hutchins and others. (Company was recently reported incorporated under Jackson, Miss.)

RAILROAD CONSTRUCTION

RAILWAYS

Appalachia, Va.—The Black Mountain Railroad is reported completed and put in operation from a connection with the Virginia & Southwestern Railway at Appalachia to the Black Mountain coalfields.

Asheville, N. C.—Buncombe county has, it is reported, voted to issue bonds to aid the proposed Appalachian Interurban Railway promoted by S. A. Jones of Waynesville, N. C., and others. Polk county is also reported to have voted bonds for the same road. A later report says that Transylvania county has voted bonds for the line. Henderson and Haywood counties have likewise approved aid bonds.

Bamberg, S. C.—The Bamberg, Ehrhardt & Walterboro Railway Co. has organized by electing officers as follows: Dr. J. L. Copeland of Ehrhardt, president; C. W. Garriss of Denmark, vice-president and general manager; H. J. Brabham of Bamberg, treasurer; James A. Wyman, secretary and counsel. Application will be made for a charter to build from Bamberg to Denmark, S. C.

Biloxi, Miss.—An officer is reported as saying that survey is partially made and part of the right of way has been obtained for the proposed Biloxi Great Northern Railway from Biloxi 100 miles to a connection with the Mobile & Ohio Railroad, probably at Bucatunna, Miss. W. M. Dukate is president and W. L. Covel is chief engineer at Biloxi, Miss.

Bristol, Tenn.—The line proposed by the Bristol & Kingsport Railway Co., just incorporated, is to be 25 miles long, from Bristol via Blountville to Kingsport, Tenn., all in Sullivan county. George L. Carter, president of the South & Western Railway, is said to be indirectly interested. The incorporators include Ex-Governor John I. Cox, James B. Cox, F. Powell, F. H. Cothran and Samuel L. King of Bristol. Survey is to begin within 10 days. Officers as follows: J. I. Cox, president; S. L. King, vice-president; F. Powell, secretary and treasurer; F. H. Cothran, chief engineer; J. B. Cox, general counsel. An official writes to the Manufacturers' Record that it is hoped to be ready to let grading contract within six months.

Carthage, O. T.—The Jefferson City, Albuquerque & San Diego Railroad Co. has been chartered with \$7,000,000 capital to build from Springfield, Mo., via Carthage, O. T., to Albuquerque, N. M., and San Diego, Cal., 1600 miles; headquarters at Carthage. The incorporators are W. F. Bort of Wichita, Kan.; C. R. Wright of Liberal, Kan.; J. S. Harris of Carthage, O. T.; J. H. Langston and O. S. Jent of Guyton, O. T.

Cleveland, O. T.—R. L. Lunsford, secretary of the Wichita, Cleveland & Gulf Railway, is reported as saying that capital is partly obtained for this line, recently incorporated in Oklahoma, to build from Wichita, Kan., via Cleveland, O. T., to Fort Arthur, Texas, 634 miles. Right of way partially secured and surveys under way.

Dewey, Va.—Reported that the W. F. Bowling Lumber Co. of Dewey will construct a seven-mile narrow-gauge railroad from a connection with the Indian Creek & Pound River Railroad into the Laurel Fork region.

Emma, Texas.—An officer of the Texas

Central Railroad writes the Manufacturers' Record denying the press report that the company might build an extension from Stamford, Texas, to Emma, and also to the pasture of the Espuela Land & Cattle Co. He says: "We have no intention whatever of doing any building in the near future."

Ennis, Texas.—Concerning the report that Mr. W. J. Newcom was interested with Northern capitalists in a proposed railroad from Ennis to Waco, Texas, 70 miles, the Manufacturers' Record is informed that plans are not yet perfected.

Excelsior Springs, Mo.—The Manufacturers' Record is officially informed that the Missouri Valley Traction Co. has been incorporated to build the proposed interurban railway from St. Joseph, Mo., eastward to a point where it will be convenient to build two branches—one to Excelsior Springs and the other to Mirabile. Only preliminary work is now under way. Thomas B. Campbell of St. Joseph is president; L. L. Frost of Mirabile, Mo., first vice-president; W. A. J. Bell of Excelsior Springs, Mo., second vice-president; A. M. Bates of Excelsior Springs, treasurer; H. G. Krake of St. Joseph, secretary.

Hattiesburg, Miss.—The Birmingham & Southwestern Railway Co. has, it is reported, obtained charters in Alabama, Mississippi and Louisiana, and it is said that the plans will be carried out. The proposed road is from Birmingham, Ala., via Hattiesburg and Waynesboro, Miss., to Baton Rouge, La., with a branch from Waynesboro to Pascagoula, Miss.

High Point, N. C.—The Carolina Valley Railway Co., now operating a line from Thomasville to Denton, N. C., over 20 miles, is completing an extension between Thomasville and High Point, five miles being graded, leaving only two miles more to finish. Dee Allen, E. D. Steele and others are interested.

Houston, Texas.—The Houston, Sabine & Red River Railway Co. has elected H. W. Cortes as President and Fremont Hill as vice-president and general manager, J. M. Cotton secretary and Carey Shaw treasurer. This company was purchased by the Yankton & Southern Railway Co., of which Mr. Hill is head, and the board of directors, it is said, will consist of the officers, together with F. E. Pye and six others from South Dakota. The Yankton & Southern Railroad proposes to build from Yankton, S. D., to Galveston, Texas.

Huttonsville, W. Va.—Capt. William Harry, chief engineer for the West Virginia Midland Railroad, it is reported, has begun preliminary survey for a proposed extension of the Western Maryland Railroad from Huttonsville to Webster Springs, W. Va.

Jane, Va.—James Hatcher, superintendent of construction, is reported as saying that the Buchanan & Dickenson Railway will shortly be completed and operated. Line runs from the mouth of Grassy creek, along that stream to the mouth of Barts Lick, on the Russell Fork of Big Sandy river, 16 or 20 miles, connecting with the South & Western Railway at Barts Lick. The Yellow Poplar Lumber Co. of Coal Grove, Ohio, is back of the line, of which Leon Isaacson is president.

Johnson City, Tenn.—An outlier of the South & Western Railway is quoted as saying that grading on the line from Dante, Va., to Bostic, N. C., 21 miles, is 75 per cent. completed, including the section of 67 miles now in operation from Johnson City to Altapass, N. C., but about 35 miles of additional track has also been laid. Trains are expected to be running by July next.

Kansas City, Mo.—The Blue Valley Electric Railway Co. has been granted a franchise, and it is announced that work will begin immediately. The officers are A. Massey, president; P. G. Walton, vice-president; Joseph S. Chick, Jr., secretary and treasurer.

Knoxville, Tenn.—The court at Sevierville has ordered an election on December 14 in Sevier county to vote on \$150,000 of bonds to aid the Knoxville, Sevierville & Eastern Railroad, projected by W. J. Oliver, C. S. McManus and others.

Lake Charles, La.—Callaghan & Graham, contractors, have, it is reported, finished their grading upon the Louisiana & Pacific Railway southward from Fulton, La., and are preparing to move equipment to headquarters at Beaumont, Texas. Grade is completed between Lake Charles and Fulton excepting through 9000 feet of swamp land west of the Calcasieu river. Between Fulton and DeRidder the line is in operation.

Memphis, Tenn.—Reported that stock subscriptions are being secured to build an electric railway from Memphis via DeSoto

Wells to Olive Branch, Miss., 18 miles. The Memphis Industrial League may be able to give information.

Mexico, Mo.—Mr. A. W. Carpenter, Box 315, Memphis, Mo., writes the Manufacturers' Record that the line he is interested in between Mexico and Memphis, Mo., is to be an extension of the Iowa-Missouri Traction & Power Co., with northern terminal at Fairfield, Iowa. Contract is let, but the company is seeking local stock subscriptions. D. Fitzgerald, 80 Wall street, New York, is to finance the proposition after preliminary work is completed next spring.

Mineral Wells, Texas.—The Weatherford & Mineral Wells & Northwestern Railway is reported to have opened its extension to Oran, Texas, 19 miles, via Balesville.

Monticello, Ky.—The Monticello Railroad Construction Co. has been incorporated with \$100,000 capital to complete the Cumberland River & Nashville Railroad between Tateville and Monticello. John H. Shearer of Monticello and others are interested.

New Iberia, La.—The Manufacturers' Record is informed that Mr. R. C. Huston of the Huston Engineering Co., 613 Machea Building, New Orleans, has the engineering and construction contract for the Bayou Teche Railway & Light Co.

Oklahoma City, O. T.—The Oklahoma & Southwestern Interurban Railway Co. has been chartered to build a line from Oklahoma City to Hollis, O. T., 190 miles, at a cost of \$10,000 per mile; capital \$2,350,000. The incorporators are H. W. Curry of Eaton, Ohio; J. N. Street of Bloomington, Ill.; C. A. Schwartz, J. P. Van Allen, S. W. Johnson, O. D. Reed and C. E. Richardson, all of Frederick, O. T.; Frank B. Lucas, Samuel Ecker, Jr., J. E. Woodworth and Thomas R. Clift, all of Guthrie, O. T.

Providence, Ky.—Mr. J. T. Edwards informs the Manufacturers' Record that preparations to build a railroad from Providence to Dawson, Ky., 19 miles, have been stopped for the present. Survey is made. Next spring construction is to begin.

Purcell, I. T.—F. C. Hand, chief engineer of construction of the Oklahoma Central Railway, is quoted as saying that the company has laid this year 50 miles of track from Byars, I. T., westward, and it is now in operation from Lehigh to Blanchard, I. T., 108 miles. When completed from Lehigh into Chickasha, I. T., the line will be 131 miles long.

Stanton, Texas.—The Seaboard Northern Construction Co. of Stanton will, it is reported, award contracts for 90 miles of grade on the West Texas & Northern Railway.

St. Louis, Mo.—The Chicago & East St. Louis Short Line Railway Co. has been incorporated in Illinois, with office at Chicago, to build a steam railroad from Chicago to St. Louis. The incorporators are H. C. Osterman, William N. Drennan, H. C. Dolph, Thomas W. Flynn and William Anderson.

Thomasville, N. C.—Lane Bros. are reported to have begun construction on the Thomasville Belt Line, which will be about three miles long.

Thomasville, Ga.—The Central Florida Railway Co. has been granted authority to issue \$200,000 of bonds. The line now extends from Thomasville southward 37 miles, and it is proposed to extend it about 30 miles farther into Florida.

Tulsa, I. T.—The Tulsa-Sapulpa Interurban Railway Co., which proposes to build an electric line connecting the points named, has applied for a franchise; headquarters at Tulsa.

Wellsburg, W. Va.—The Wellsburg & Bethany Electric Railway Co. has, it is reported, let contract for building its line, which will be about seven miles long and will connect the points named in its title. F. A. Chapman and others are interested.

STREET RAILWAYS

Ardmore, I. T.—The Ardmore Traction Co., capital \$500,000, will, it is reported, apply for a street-railway franchise and will, it is said, endeavor to complete the line started by another company. The incorporators are C. L. Byrne, president; W. F. Whittington, W. P. Poland, Joseph F. Robinson, D. Fitzgerald, Joseph F. Myers and John D. Cameron.

Dalhart, Texas.—Reese Tatum of Dalhart is reported as saying that an electric street railway will be built, work to begin within six months.

Denton, Texas.—The Denton Street Railway Co. is reported to have begun operating its line.

New Orleans, La.—Charles R. Kennedy, comptroller, will, it is stated, receive bids until December 11 for an electric street-rail-

way franchise on St. Bernard avenue, Broad street and other thoroughfares.

San Antonio, Texas.—The City Council has granted a franchise to the San Antonio Traction Co. for an extension. W. B. Tuttle is vice-president and general manager.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Agricultural Machinery.—Frank E. Lloyd, Salisbury, N. C., wants to correspond with manufacturers of agricultural machinery and tools, relative to representing them in Mexico.

Air Compressors.—Oklahoma City Steel and Iron Works, Oklahoma City, O. T., wants prices on air compressors, etc.

Ash Holsts.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of ash holsts relative to representing them in Norway.

Bank Fixtures.—H. D. Ardrey, president Traders' Bank & Trust Co., Dallas, Texas, wants bank fixtures.

Bathroom Fixtures.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on bathroom fixtures.

Blower System.—American Casket Manufacturing Co., Fort Worth, Texas, wants shaving-collecting system.

Boiler.—Baltimore (Md.) Board of Awards, City Hall, will receive bids until November 13 for installing a steam boiler in quarantine tug E. Clay Timanus. Specifications may be obtained from Dr. James Bosley, Commissioner of Health.

Boiler.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., wants boiler.

Boilers.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants 80 and 125-horse-power boilers.

Boilers.—Oklahoma City Steel and Iron Works, Oklahoma City, O. T., wants prices on boilers.

Bolt and Nut Machine.—See "Machine Tools."

Brick.—Sealed proposals for red bricks will be received until November 12 at office of Building for National Museum, Library of Congress, Washington, D. C., for this building. Specifications and other information on application; Bernard R. Green, superintendent of construction.

Brick Machinery.—Hansen Sand Lime Brick Co., Hansen, Ga., will need presses, retorts, cast-iron cars, turntables, hydrating machinery for lime, etc., for sand-lime brick plant.

Bridge Construction.—Bids will be received at office of State Highway Commissioner, Capitol Building, Richmond, Va., until November 9 for construction of a 50-foot-span reinforced-concrete bridge and repairs to old abutments over North Run creek, about four miles from Richmond. Plans and specifications on file at office of State Highway Commissioner; Board of Supervisors of Henrico county, W. C. Saunders, chairman, Richmond, Va., reserves usual rights; certified check, \$100.

Bridge Construction.—Commissioners' Court of Young County, Graham, Texas, will open bids November 20 for construction of two bridges across Brazos river in Young county, for which \$40,000 of bonds have been issued; George H. McLaren, Graham, Texas, County Judge.

Cars.—See "Brick Machinery."

Carton Machinery.—J. B. Peters, secretary Board of Trade, 18 5th street, Bristol, Tenn., wants to correspond with manufacturers of carton machinery.

Church Bells.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on bells or peals for church.

Church Furniture.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on 125 chairs for church annex; also wants pulpit furniture.

Clock Manufacturers.—Hurst Planetarium Co., Blakely, Ga., wants to obtain estimates on the manufacture of a mechanical device designed to be constructed and operated similar to a clock.

Clock System.—Office Superintendent Elliott Woods, U. S. Capitol Building and Grounds, Washington, D. C. Proposals will be received until Wednesday, November 27, for electric clock system for office building, House of Representatives. System shall consist of one master clock, capable of driving 500 units, and 422 secondary clocks, for office-rooms. The secondary clocks for office-rooms called for above shall be all of the same size and same design of case, and the present contract shall not include any clocks of special design required for committee and other similar rooms.

Concrete Machinery.—Frank E. Parke, Mayor, McCurtain, I. T., wants concrete machinery.

Concrete Mixer.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants No. 2½ Smith concrete mixer, with boiler on wheels.

Corn Mill.—Carolina Ice & Packing Co., Darlington, S. C., wants 48-inch Carolina mill rocks or good corn mill for grinding flat meal.

Cotton Gin.—C. H. Cleveland, Centerville, Ala., will need cotton-gin equipment.

Cotton-wadding Machinery.—Wilson Grocery Co., Wilson, N. C., wants information and prices on machinery for making cotton wadding from linters; also on dyeing and sizing the product.

Culinary (Electric) Equipment.—C. B. Powell, Agricultural College, Miss., wants to correspond with manufacturers of electrical cooking equipment.

Dryklyn.—H. C. Buck, Jr., Company, Artesia, postoffice at Hallsboro, N. C., wants dryklyn.

Dryklyn Heating.—American Casket Manufacturing Co., Fort Worth, Texas, wants dryklyn heating.

Dyeing Machinery.—Wilson Grocery Co., Wilson, N. C., wants information and prices on equipment for dyeing cotton wadding made from linters.

Electric Drills.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of electric drills relative to representing them in Norway.

Electric Lamps.—See "Incandescent Lamps."

Electric-light Machinery.—Columbia Ice & Light Co., Columbia, Miss., wants equipment for electric-light plant; 100 kilowatt; has engine and generator.

Electric-light Plant.—F. H. Brooks, committee, Smithfield, N. C., wants bids on plans for electric-light plant for city.

Electric Plant.—Newton Sawmill Co., Newton, Texas, will buy electric plant for mill.

Electric Wiring.—West Virginia Architects and Builders, Huntington, W. Va., want bids on electric wiring.

Electrical Cookers.—See "Culinary (Electric) Equipment."

Electrical Equipment.—Home Friend Publishing Co., 1423 Virginia street, Kansas City, Mo., wants dynamos.

Electrical Machinery.—American Casket Manufacturing Co., Fort Worth, Texas, wants 200-kilowatt generator, also 18 small motors from ½ to 15 horse-power.

Electrical Machinery.—Stanton Canning Co., Inc., Richmond, Va., in market for second-hand 120-kilowatt generator, transformer and motors.

Electrical Machinery.—J. W. Kohn, 1916 Scranton road, Cleveland, Ohio, is in market for 200-kilowatt 220-250-volt generator direct connected to a good, substantial engine; one 300-kilowatt 550-volt generator direct connected to engine; one 150-kilowatt six-pole 550-volt belted railway generator; 20 direct-current 220-250-volt motors ranging from 5 to 25 horse-power in size.

Electrical Machinery.—Thomasville Light & Power Co., Thomasville, N. C., wants three-phase, 100-kilowatt and 50 kilowatt alternators, 2200-volt, 60-cycle, revolving field; also meters, transformers, etc.

Elevator.—Sealed proposals will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until November 23 for electric freight elevator in Building 6, naval station, New Orleans, La. Plans and specifications can be seen at bureau or will be furnished by commandant of naval station named; Wm. M. Smith, acting chief of bureau.

Elevator.—West Virginia Architects and Builders, Huntington, W. Va., want bids on hydraulic elevator for lodge building.

Elevator.—American Casket Manufacturing Co., Fort Worth, Texas, wants freight elevator.

Engine.—H. C. Buck, Jr., Company, Artesia, postoffice at Hallsboro, N. C., wants engine.

Engine.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., wants engine.

Engine.—See "Gasoline Engine."

Engine.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants 300-horse-power Corliss engine.

Engine.—J. W. Kohn, 1916 Scranton road, Cleveland, Ohio, is in market for engine. (See "Electrical Machinery.")

Engine.—R. L. Moore, president Standard Ice & Light Co., Magnolia, Ark., wants 125 to 150-horse-power high-speed automatic engine for electric-light plant; immediate delivery f. o. b. Magnolia.

Engines.—Oklahoma City Steel and Iron Works, Oklahoma City, O. T., wants prices on Corliss engines.

Engine Lathe.—See "Machine Tools."

Excelsior Machinery.—J. B. Cater, Malcolm, Ala., wants addresses of manufacturers of excelsior machinery.

Furniture-factory Supplies.—W. C. Edwards, manager Toccoa Furniture Co., Toccoa, Ga., wants furniture-factory supplies of all kinds.

Forced-draft Apparatus.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of forced-draft apparatus relative to representing them in Norway.

Garbage Disposal.—Baltimore (Md.) Board of Awards, City Hall, will receive bids until November 20 for removal and final disposition of garbage, dead animals and market refuse of the city from January 1, 1908, to January 1, 1918. Bids are to be submitted on the Arnold-Edgerton system of garbage reduction, and also for purchase of an established plant constructed on this system and operated by the previous contractor. Plans and specifications can be obtained from J. L. Wickes, Commissioner of Street-Cleaning, City Hall, Baltimore, Md.

Gas Engine and Producer.—C. B. Wier, Quitman, Miss., wants gas engine and producer.

Gas Engine.—Home Friend Publishing Co., 1423 Virginia street, Kansas City, Mo., wants 18-horse-power gas engine.

Gasoline Engine.—Virginia Sanatorium for Consumptives, D. W. R. Read, secretary, Ironville, Va., wants four to six-horse-power gasoline engine; new or second-hand; guaranteed in good condition.

Handle Machinery.—B. W. Morris, Valdosta, Ga., is in market for machinery for making axe and hammer handles.

Heating Equipment.—School District of Pine Bluff, Ark., will open bids November 23 at office of S. M. Taylor, president of board, for heating and ventilating school building. Plans and specifications on file in office of president of board or of Fred Wilson, superintendent of building; certified check, \$500.

Heating Plant.—Birkner Bros., Uvalde, Texas, want bids on steam or hot-air heating for \$36,000 school building.

Heating Plant.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on furnace for \$6000 church.

Heating Plant.—See "Drykiln Heating."

Heating Plant.—John L. Cleveland, chairman School Board, Cleburne, Texas, will open bids November 14 for installation of central heating plant for school buildings; plans on file at office of Sanguinet & Staats, Fort Worth, Texas; Sanguinet, Staats & Hill, Dallas, Texas, and Mr. Cleveland at Cleburne.

Hoisting Machinery.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., wants hoisting machinery.

Hollow Tile.—Elias Carr, Raleigh, N. C., wants to correspond with manufacturers of and dealers in hollow tiles.

Hydrating Machinery.—Hansen Sand-Lime Brick Co., Hansen, Ga., will need hydrating machinery for lime.

Hydrating Plant.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., is in market for hydrating plant. (See "Limekilns.")

Ice Machinery.—Columbia Ice & Light Co., Columbia, Miss., wants ice machinery for 25-ton plant.

Ice Plant.—L. Dustin, Edna, Texas, wants to correspond with contractors for ice plants.

Incandescent Lamps.—James McD. Hutton, Realty Building, Jacksonville, Fla., wants addresses of manufacturers of glass electric-light bulbs, especially Southern manufacturers.

Insulating Materials.—See "Hollow Tile," "Mineral Wool" and "Pitch."

Iron-bed Plant.—Fruitthurst Manufacturing Co., Fruitthurst, Ala., wants prices on equipment and supplies for iron-bed plant.

Ironworking Machinery.—See "Machine Tools."

Lampposts.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on four lampposts.

Laundry Equipment.—C. T. Hughes, Pickens, S. C., wants information relative to installation of steam laundry for small town.

Laundry Machinery.—L. Dustin, Edna, Texas, wants to correspond with contractors for steam-laundry plants.

Leather Goods.—Felix Eisenberg, No. 4 Warsawicka, Warsaw, Russia, wants information and prices on shoe, wagon and furniture leather and other American manufactures, with a view of making purchases or acting as agent for manufacturers.

Levee Work.—Mississippi River Commission, First and Second districts, U. S. Engineer Office, Room 20, Custom-house, Memphis, Tenn. Sealed proposals for about 190,000 cubic yards of levee work and 40,000 cubic yards of drainage ditch in Upper St. Francis levee district will be received November 25. Information furnished on application; Wm. D. Connor, Captain, Engineers. (This item lately mentioned, but address of Captain Connor was erroneously stated as New Orleans, La.)

Limekilns.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., in market for limekilns. (See "Hydrating Plant.")

Linotype Machine.—Wilson Publishing Co., Wilson, N. C., wants linotype machine.

Loader.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants loader.

Logging Equipment.—Weston Lumber Co., Weston, W. Va., wants first-class second-hand narrow-gauge log-loader and 12 narrow-gauge logging cars.

Logging Cars.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants logging cars.

Machine Tools.—H. W. Dexter, 323 Empire Building, Atlanta, Ga., wants dealers' prices and catalogues of 48-inch radial drill with rotary bed if possible; 12 to 15-inch shaper complete; bolt and nut machine, 1 1/2 to 1 3/4 inches; 500-pound steam hammer; open side planer 36x36 inches by 8 feet—solid head will do; 36-inch swing engine lathe; second-hand tools preferred.

Machinery Manufacturers.—See "Clock Manufacturers."

Marine Apparatus.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of steam steering gears, patent stokers, ash hoists, davits, sounding machines, etc., relative to representing them in Norway.

Metal Ceilings.—West Virginia Architects & Builders, Huntington, W. Va., want bids on metal ceilings.

Mineral Wool.—Elias Carr, Raleigh, N. C., wants to correspond with manufacturers of and dealers in mineral wool.

Mining Machinery.—Frank E. Lloyd, Salisbury, N. C., wants to correspond with manufacturers of mining machinery and tools, relative to representing them in Mexico.

Miscellaneous Supplies.—Bids will be received at office of H. F. Hodges, Lieutenant-Colonel, Corps of Engineers, U. S. A., General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until November 11 for furnishing furniture, refrigerators, beds, mattresses, etc. General information relating to circular No. 400 can be obtained from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1066 North Point street, San Francisco, Cal.; and 410 Chamber of Commerce Building, Tacoma, Wash.; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quartermaster, Jeffersonville, Ind.; and Chief Quartermaster, Atlanta, Ga., and at U. S. Engineer Office in following cities: Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit and Milwaukee.

Paper-box Machinery.—J. B. Peters, secretary Board of Trade, 18 5th street, Bristol, Tenn.-Va., wants to correspond with manufacturers of paper-box and carton machinery.

Paving.—Bids addressed to Mayor and General Council, Atlanta, Ga., will be received at office of W. J. Campbell, City Clerk, Atlanta, Ga., until November 18 for repaving Broad street from Mitchell to Peachtree streets with creosote blocks, about 12,000 square yards; certified check, \$500, payable to Mr. Campbell. Specifications will be furnished on application to R. M. Clayton, City Engineer, Atlanta, Ga.; usual rights reserved.

Peanut Machinery.—Hubert W. Whitaker, Jena, La., wants information on manufacture of peanut oil and other peanut products, and prices on machinery required.

Pitch.—Elias Carr, Raleigh, N. C., wants to correspond with manufacturers of pitch.

Plumbing.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants plumbing for \$6000 church.

Pneumatic Tools.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of pneumatic tools relative to representing them in Norway.

Printing Press.—Wilson Publishing Co., Wilson, N. C., wants printing press.

Producer-gas Plant.—See "Gas Engine and Producer."

Pump.—American Hosiery Mills, Kernersville, N. C., in market for new or second-hand centrifugal pump; two-inch suction and two-inch discharge.

Pumps.—American Casket Manufacturing Co., Fort Worth, Texas, wants fire pump, 1000 gallons per minute; also wants feed pump.

Rails.—Snowbird Valley Railway Co., Andrews, N. C., are in the market for four miles of 30-pound steel rail, either new or good relays; quote delivered prices.

Railway Equipment.—Newton Sawmill Co., Newton, Texas, will buy two locomotives and from five to seven miles steel rails.

Railway Locomotive.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants 20-ton Shay locomotive.

Railway Equipment.—W. L. Van Duzor, president Pineola Hydrated Lime Co., Kissimmee, Fla., in market for rails and dump cars.

Railway Equipment.—Weston Lumber Co., Weston, W. Va., in market for second-hand narrow-gauge Climax locomotive of about 22 tons weight; second-hand narrow-gauge log-loader; 12 narrow-gauge logging cars.

Road Construction.—Bids will be received at office of Quartermaster, Fort Myer, Virginia, until November 25 for construction of roadway leading to Quartermaster's shop; Government reserves usual rights; information on application; B. B. Hyer, Constructing Quartermaster.

Roofing.—Carpenter, Taylor & Co., Rutherfordton, N. C., want to buy 50 to 75 squares V-crimp roofing.

Sawmill.—C. H. Cleveland, Centerville, Ala., will need sawmill equipment.

Sewer System.—F. H. Brooks, committee, Smithfield, N. C., wants bids on plans for sewer system for city.

Shafting.—American Casket Manufacturing Co., Fort Worth, Texas, wants shafting.

Sizing Machinery.—Wilson Grocery Co., Wilson, N. C., wants information and prices on machinery for sizing cotton wadding made from linters.

Skidder and Loader.—D. F. Hill, 329 North Calvert street, Baltimore, Md., wants skidder and loader.

Stained-glass Windows.—Rev. Oliver B. Doud, Avenue C and 7th street, Lawton, O. T., wants prices on stained-glass windows for \$6000 church.

Steam Hammer.—See "Machine Tools."

Steam Plant.—See "Laundry Machinery" and "Ice Plant."

Stokers.—"Norway Trade," care of Manufacturers' Record, wants to correspond with manufacturers of patent mechanical stokers relative to representing them in Norway.

Structural Steel.—Elliott Woods, Superintendent U. S. Capitol Building and Grounds, Washington, D. C., will receive bids until November 27 for steel framing for roof of office building for the U. S. Senate. Plans and specifications can be obtained upon deposit of certified check of \$35.

Tank.—Sealed proposals will be received until November 28 for construction of 150,000-gallon steel tank on 75-foot trestle. Address Capt. L. F. Garrard, Fort Morgan, Alabama.

Tank.—American Casket Manufacturing Co., Fort Worth, Texas, wants 5000-gallon cypress tank.

Vault.—H. D. Ardrey, president Traders' Bank & Trust Co., Dallas, Texas, wants bank vault.

Ventilating Apparatus.—See "Heating Equipment."

Water-wheels.—D. G. Ziegler, Columbia, S. C., wants catalogues and prices of water-wheels and accompanying equipment.

Water-works.—A. S. Grady, Mayor, Mount Olive, N. C., will want estimates on tank or other reservoir, engine for pumping or supplying water and other machinery for contemplated water-works system.

Water-works.—Newton Sawmill Co., Newton, Texas, will buy water-works for mill.

Water-works System.—F. H. Brooks, committee, Smithfield, N. C., wants bids on plans for water-works system for city.

Woodworking Machinery.—Frank E. Parke, Mayor, McCurtain, I. T., wants woodworking machinery.

Woodworking Machinery.—American Casket Manufacturing Co., Fort Worth, Texas, wants woodworking machinery.

Woodworking Machinery.—H. C. Buck, Jr., Company, Artesia, postoffice at Hallsboro, N. C., wants planer and matcher, and rip-saw.

Woodworking Machinery.—See "Handle Machinery."

INDUSTRIAL NEWS OF INTEREST

Muralt & Co. in New Orleans.

Messrs. Muralt & Co., engineers, 114 Liberty street, New York, have established a Southern office in the Title Guarantee Building, Birmingham, Ala. Their manager in this new branch is John W. Ager.

Household Novelty for Sale.

A Southern professional man offers for sale the patent on a household novelty for general trade. He states the article can be quickly developed into a rapid seller. For information address Lock Box 311, Dillsboro, N. C.

Shoe Factory for Sale.

On November 19 the plant, stock, machinery and general equipment of the Putney Shoe Manufacturing Co. will be offered for sale at public auction. Samuel R. Buxton of Newport News, Va., where the plant is located, can give information.

B. M. Hall Examining Mexican Mines

During November B. M. Hall of Atlanta, Ga., will be in Mexico examining mines in the State of Oaxaca. He is well known as a member of the firm of Hall Bros., offices at 413 Temple Court, Atlanta, and is consulting engineer for the U. S. Reclamation Service and the Insular Government of Porto Rico.

Myers Pumps in Africa.

Messrs. Geo. North & Son, Durban, Natal, South Africa, report having made a very large exhibit of Myers power pumps, all shown in motion, and being awarded the first prize gold medal for the best collection of pumps. Myers pumps were also largely exhibited by Messrs. Haarhoff & Co., but not in motion. Messrs. F. E. Myers & Bro. of Ashland, Ohio, manufacture the pumps.

Vises for Railroads.

The Pittsburg (Pa.) Automatic Vise & Tool Co. has recently equipped the shops of New York Central Railway, the Pennsylvania Railroad, Louisville & Nashville, Atlantic Sea Coast, Seaboard Air Line, Norfolk & Western, Grand Trunk and the St. Louis & Southwestern, besides many others. The Pittsburg high-speed type vises appear to appeal especially to the hard service found in railroad shops.

Mining and Agricultural Tools.

Having passed several years in Mexico and become acquainted with managers of mining companies, railway construction companies and others needing machinery and supplies, Frank E. Lloyd of Salisbury, N. C., has decided to establish a supply plant in Mexico. Mr. Lloyd is now prepared to correspond with manufacturers of mining and agricultural machinery and tools relative to representing them.

Corrugated Bars for Reinforcement.

The Expanded Metal & Corrugated Bar Co. of St. Louis, Mo., is furnishing the reinforcement required for the construction of the Pennsylvania Railway terminal station, 7th to 9th street, from 31st to 33d street, New York. An order for 1000 tons of corrugated bars has been placed with the above company by the contractor—the National Fireproofing Co. McKim, Mead & White of New York are the architects for this work.

Mr. Philip E. Robinson, Architect.

One of the younger architects of the South is Philip E. Robinson of Savannah, Ga., offices in the National Building. He has furnished plans and specifications for many buildings in the South Atlantic and Gulf [Continued on Page 86.]

ANNUAL REPORT

OF THE

Alabama Great Southern Railroad Company,

Year Ended June 30, 1907.

New York, October 1, 1907.

To the Stockholders of the Alabama Great Southern Railroad Company:
The President and Board of Directors submit the following report of the operations of the Company for the year ended June 30, 1907:

MILEAGE OPERATED.

Main Line:	
Chattanooga, Tenn., to Meridian, Miss.	290.49 miles.
Trackage Rights:	
Nashville, Chattanooga & St. Louis Railway:	
Cravens, Tenn., to Wauhatchie, Tenn.	5.01
Southern Railway:	
Attalla, Ala., to Gadsden, Ala.	5.90
Woodstock & Blocton Railway:	
Woodstock, Ala., to Blocton, Ala.	8.01
	18.92 "
Total	309.41 "

INCOME ACCOUNT.

	1907.	1906.	Increase.
Gross Earnings from Operation	\$4,168,478 33	\$3,774,620 46	\$393,857 87
Operating Expenses and Taxes	3,406,554 23	3,061,866 82	344,687 41
Net Earnings from Operation	\$761,924 10	\$712,753 64	\$49,170 46
Income from Other Sources	55,038 03	53,309 20	1,728 83
Total Income	\$816,962 13	\$766,062 84	\$50,899 29
Interest and Rentals	\$299,532 02	\$296,241 03	\$3,290 99
Other Deductions from Income	103,752 62	71,356 93	32,395 69
Total Deductions	\$403,284 64	\$367,597 96	\$35,686 68
Balance of Income over Charges	\$413,677 49	\$398,464 88	\$15,212 61
Dividends on Preferred Stock:			
3 per cent. in February, 1906; 3 per cent. in February, 1907, and Reserves for 3 per cent. in August, 1906, and 3 per cent. in August, 1907	202,821 00	195,052 96	7,768 04
Balance carried to credit of Profit and Loss	\$210,856 49	\$203,411 92	\$7,444 57

For details of Income Account see Table 2, and of Earnings and Expenses see Tables 6 and 7, pages 22 and 23 of pamphlet report.

PROFIT AND LOSS ACCOUNT.

The Balance at Credit of Profit and Loss on June 30, 1907, was	\$780,143 68
The Balance at Credit of Profit and Loss on June 30, 1906, was	576,110 82
Increase for the fiscal year ended June 30, 1907	\$204,032 86

FINANCIAL CONDITION.

The Financial Condition of the Company at the close of the year is shown in the Balance Sheet (Table 1).

On October 18, 1906, the Board of Directors authorized the sale of 550,000 par value of General Mortgage Five Per Cent. Bonds, the proceeds of which were used in part payment of amount borrowed to make cash payment on account of the purchase price of 2000 freight cars and 8 locomotives covered by Equipment Trust Agreement, Series "C," dated May 1, 1906.

The General Mortgage Bonds outstanding June 30, 1906, amounted to \$680,000, equivalent to \$3,207,600 00

Issued during the year, 550,000, equivalent to 243,000 00

Total outstanding June 30, 1907, \$710,000, equivalent to \$3,450,600 00

Two payments on account of Certificates for Funded Arrears were made during the year, one in July, 1906, and the other in January, 1907, as provided for in the agreement, reducing the amount of such certificates outstanding from \$399,464.49 to \$319,571.60.

During the year the Chattanooga Station Company, referred to in last year's annual report, authorized the issue of \$1,000,000 First Mortgage Four Per Cent. Fifty-Year Bonds, due January 1, 1957, which are to be guaranteed, principal and interest, by the lines in interest, viz.: Southern Railway Company, Central of Georgia Railway Company, the Cincinnati, New Orleans & Texas Pacific Railway Company and the Alabama Great Southern Railroad Company. The proceeds from sale of said bonds are to be used in the purchase of lands and the construction of a substantial modern passenger station at Chattanooga, Tenn.

The Birmingham Terminal Company has authorized an issue of \$3,000,000 Four Per Cent. Fifty-Year Bonds, which will mature March 1, 1957. These bonds are to be guaranteed, principal and interest, by the six lines in interest, viz.: Southern Railway Company, Illinois Central Railroad Company, Seaboard Air Line Railway, Central of Georgia Railway Company, St. Louis & San Francisco Railroad Company and Alabama Great Southern Railroad Company. Mention was made in last year's report of the incorporation of this Terminal Company. Proceeds from sale of the bonds referred to will be used to pay for the acquisition of real estate for and the construction and equipment of its railroad, union passenger station and terminal facilities in the city of Birmingham, Ala.

Southern Railway Company, Mobile & Ohio Railroad Company, New Orleans & North-eastern Railroad Company, Alabama & Vicksburg Railway Company and Alabama Great Southern Railroad Company, the five lines interested in the formation of the Meridian Terminal Company, referred to in last year's report, have guaranteed, jointly and severally, the due and punctual payment of the interest on \$250,000 First Mortgage Four Per Cent. Fifty-Year Bonds of the Terminal Company, dated May 1, 1905. The proceeds realized from the sale of these bonds were used in acquiring necessary real estate for and the construction and equipment of the Terminal Company's union passenger station and facilities in the city of Meridian, Miss.

Equipment Trust Obligations outstanding at the close of the year were as follows:

Date of trust.	Description of equipment.	Original amount.	Amount paid.	Amount outstanding.	Date of final paym't.
June 1, 1903	200 D. B. Coal Cars.	\$125,000 00	\$101,000 00	\$24,000 00	June 1, 1908
	1000 Box Cars.				
	250 Gondola Cars.				
Feb. 1, 1905	200 Coke Cars.	1,000,000 00	200,000 00	800,000 00	Feb. 1, 1915
	100 Ore Cars.				
	12 Locomotives.				
	8 Locomotives.				
May 1, 1906	1000 Box Cars.	1,479,000 00	148,000 00	1,331,000 00	May 1, 1916
	250 Coke Cars.				
	250 Flat Cars.				
	250 Gondola Cars.				
	250 Steel Hopper Cars.				
		\$2,604,000 00	\$449,000 00	\$2,155,000 00	

Equipment Trust Obligations outstanding June 30, 1906, amounted to \$2,427,000 00 Of which there has been paid during the fiscal year and charged to Capital Account or to Reserve Account for the Replacement of Rolling Stock 272,000 00

Balance outstanding June 30, 1907 (see Balance Sheet, Table 1) \$2,155,000 00

EQUIPMENT.

The equipment at the close of the year, as shown in Table 14, page 30 of pamphlet report, consisted of:

Locomotives	75
Passenger-Train Cars	43
Freight-Train Cars	6253
Road-Service Cars	11

Of this equipment 20 locomotives and 3750 freight cars are subject to Equipment Trust Liens. The remainder is the property of the Company.

The 8 locomotives and 2000 freight cars contracted for in May, 1906, have been received and are now in service.

In November, 1906, contract was made for 4 Pacific type passenger locomotives, 6 consolidation freight locomotives and 3 switching locomotives. The contract provides for 20 per cent. of the purchase price to be paid upon delivery of the locomotives, the balance to be represented by equipment obligations covering a period of three years. The locomotives were received during July and August, 1907, and are now in service.

During the year 4 first-class passenger cars and 2 baggage cars were purchased, and 2 passenger cars were changed to relief cars.

One derrick car was purchased and 4 four-wheel caboose cars were built at the Birmingham shops.

EARNINGS AND EXPENSES.

The Earnings and Expenses for the year ended June 30, 1907, as compared with those for the preceding year, were as follows:

	1907.	1906.	Increase.	Per cent.
Gross Earnings:				
Passenger	\$1,037,574 71	\$899,084 73	\$138,489 98	15.40
Freight	2,629,827 01	2,463,917 76	165,909 25	6.73
Mail	67,140 48	71,498 70	4,358 22	6.10
Express	106,606 17	83,547 03	23,059 14	27.60
Miscellaneous	327,329 96	256,572 24	70,757 72	27.58
Total	\$4,168,478 33	\$3,774,620 46	\$393,857 87	10.43
Operating Expenses and Taxes:				
Maintenance of Way and Structures	\$707,396 67	\$611,904 39	\$95,492 28	15.61
Maintenance of Equipment	914,448 58	871,309 50	43,139 08	4.95
Conducting Transportation	1,553,123 05	1,387,276 85	165,846 20	11.96
General Expenses	116,909 21	92,574 88	24,334 33	26.15
Taxes	114,671 12	98,701 20	15,969 92	16.18
Total	\$3,406,554 23	\$3,061,866 82	\$344,687 41	11.26
Net Earnings from Operation	\$761,924 10	\$712,753 64	\$49,170 46	6.90
Ratio of Expenses to Earnings	81.72%	81.12%	.60%	

Maintenance of Way and Structures:

The increase of \$95,492.28, or 15.61 per cent., in this account was due principally to the cost of installing new electric block signals, reconstruction of bridge over Chattanooga Creek, change of grade near Rising Fawn, Ga., and Porterville, Ala.; improvements to freight and passenger stations, fuel and water stations and shops, and also to the increased cost of all classes of labor and materials entering into this expense.

Maintenance of Equipment:

The increase in this expense, \$43,139.08, or 4.95 per cent., was due to increased equipment and the higher cost of labor and materials.

Two hundred freight cars of 30,000 and 40,000 pounds capacity, old and unfit for service, were either sold or dismantled during the year, the cost to renew which was charged to this account and a reserve created to replace same at some future date.

The capacity of 12 freight cars was increased from 40,000 to 60,000 pounds each, and the bodies of 542 freight cars were rebuilt during the year.

Conducting Transportation:

The increase of \$165,846.20, or 11.96 per cent., in this account was due principally to higher prices paid for labor, materials and fuel and to congestion of traffic.

General Expenses and Taxes:

The increases in these accounts were due to greater cost of insurance and higher taxes, the latter having increased from \$98,701.20 in 1906 to \$114,671.12 in 1907, or 16.18 per cent.

PASSENGER TRAFFIC.

There was an increase in revenue from passengers of \$138,489.98, or 15.40 per cent., as compared with the previous year.

The number of passengers carried increased 90,675, or 14.75 per cent.

The number of passengers carried one mile increased 430,468, or 11.38 per cent.

The average distance traveled by each passenger was 50.30 miles, as compared with 62.02 miles for the previous year, a decrease of 2.93 per cent.

The average rate per passenger per mile was 2.44 cents, as compared with 2.36 cents for the previous year, an increase of 3.39 per cent.

The average earnings of passenger trains per mile run were \$1.47, as compared with \$1.36 for the previous year, an increase of 7.98 per cent.

FREIGHT TRAFFIC.

There was an increase in revenue from freight of \$165,909.25, or 6.73 per cent.

The number of tons of commercial freight carried decreased 43,151, or 1.44 per cent.

The number of tons of commercial freight carried one mile decreased 3,996,758, or 1.09 per cent.

The average length of haul per ton was 122.82 miles, as compared with 122.28 miles during the previous year, an increase of 0.36 per cent.

The average rate per ton per mile was .73 of a cent as compared with .67 of a cent for the previous year, an increase of 8.96 per cent.

The average earnings of freight trains per mile run were \$2.65, as compared with \$2.48 for the previous year, an increase of 7 per cent.

OTHER TRAFFIC STATISTICS.

The revenue train miles were 1,822,370, an increase of 45,888 miles, or 2.58 per cent., as compared with the previous year.

The engine miles were 2,648,649, an increase of 75,336 miles, or 2.93 per cent., as compared with the previous year.

The passenger car miles were 5,132,881, an increase of 436,677 miles, or 9.30 per cent., as compared with the previous year.

The average number of cars in each freight train decreased from 26.13 in 1906 to 25.03 in 1907, or 4.21 per cent.

The average number of tons of freight in each loaded car (including Company's material) increased from 19.37 in 1906 to 19.40 in 1907, or 0.15 per cent.

The average number of tons of freight in each train (including Company's material) decreased from 377.89 in 1906 to 375.81 in 1907, or 0.55 per cent.

Revenue freight car miles were 24,790,487, a decrease of 1,159,201 miles, or 4.47 per cent., as compared with the previous year.

Tons moved (including Company's freight) were 3,083,806, a decrease of 38,998 tons, or 1.25 per cent.

PHYSICAL CONDITION.

Steel Rail:

There were laid during the year 3500 tons of new 80-pound steel rail, replacing worn 60-pound rail, as against 45 tons of new 80-pound steel rail laid in the previous year.

The weight of rail in main track owned June 30, 1907, was as follows:

80-pound Steel Rail	49.15 miles.
75-pound Steel Rail	241.34 "
	290.49 "

All of the main line owned is now laid with 75-pound or 80-pound steel rail.

Side Tracks:

There were constructed during the year 2.63 miles of side tracks for industrial plants, 1.03 miles of which are on the Alabama Great Southern Railroad and 1.60 miles on the Belt Railway of Chattanooga; also 5.84 miles of station, yard and passing tracks on the Alabama Great Southern Railroad.

There have been taken up and disposed of .26 of a mile of side track on the Alabama Great Southern Railroad and .06 of a mile of side track on the Belt Railway of Chattanooga.

The net increase in length of side tracks was 11.15 miles, of which 9.61 miles are on the Alabama Great Southern Railroad and 1.54 miles on the Belt Railway of Chattanooga.

Cross-ties Used:

For Main Line Renewals:	
Alabama Great Southern Railroad	150,100
Belt Railway of Chattanooga	11,401
For Side Track Renewals:	
Alabama Great Southern Railroad	161,501
Total Renewals	178,178
For New Side Tracks:	
Alabama Great Southern Railroad	30,629
Belt Railway of Chattanooga	2,625
Total	211,432

During the past 10 years cross-ties have been put in the track as follows:

	Number of ties used.	Average number per mile of track maintained.
1897-1898	149,605	281
1898-1899	141,246	360
1899-1900	138,132	349
1900-1901	106,671	268
1901-1902	120,119	302
1902-1903	235,045	576
1903-1904	214,241	511
1904-1905	173,544	403
1905-1906	181,450	416
1906-1907	211,432	460
Average per year	167,158	403

32.27 cubic yards of slag were distributed during the year for renewal of old ballast.

The number of miles of ballasted track on June 30, 1907, was as follows:

	Stone.	Slag.	Cinder.	Total.
Alabama Great Southern Railroad	281.50	8.96	—	290.49
Belt Railway of Chattanooga	4.00	10.00	—	14.00
	4.00	290.50	8.96	304.49

Bridges and Trestles:

During the year progress was made in the rebuilding of Chattanooga Creek Bridge. Bridges 205-7, 225-7, 245-7 and 246-6, aggregating 3408 feet, were completely renewed with cross-tied timbers and ballasted decks, and eight wooden trestles were substantially renewed. During the year the length of wooden trestles was reduced 119 linear feet, permanent structures having been substituted.

The total length of bridges of various kinds on the road June 30, 1907, was 40,565 linear feet, made up as follows:

Iron or Steel Structures.....	2,210 linear feet.
Wooden Trestles.....	34,573 "
Ballasted Deck Trestles.....	3,782 "
	40,565 "

Automatic Block Signals and Interlocking Plants:

During the year 10 automatic block signals were added, making a total of 33 in service on June 30, 1907, protecting 28.6 miles of track.

There were three interlocking plants in service at the close of the year.

Buildings and Structures:

Water tanks of 50,000 gallons capacity were built at Fort Payne and Collbran, Ala., and a 75,000-gallon tank with two water columns was installed at York, Ala. New section and tool houses were built at Fort Payne, Attalla, Tuscaloosa, Eutaw, Livingston and York, Ala., and at Russell and Meridian, Miss. A car inspector's house and lechouse were built at Porterville, Ala.

Depots, platforms and buildings were extended and repaired at Collinsville, Keener, Attalla, Whitney, Trussville, Vance, Coaling and York, Ala.

Small freight depots were built at Steele and Maxwell, Ala. Platforms were built at Crudup, Attalla, St. Clair, McCalla, Powers, Cuba and Cypress, Ala., and Kewanee and Toombsville, Miss.

New track scales were installed at Tuscaloosa, Ala., and new coal chutes built at York, Ala. At Birmingham, Ala., the erecting shops were extended and two stalls and drop pit added to the roundhouse. The coal chute is being rebuilt, 75-foot turntable and 50-foot track scales installed and the freight depot and platform extended 60 feet. The addition to the offices for division officers was completed during the year.

Forty-four miles of standard wire fence were constructed, and the telegraph line between Birmingham, Ala., and Meridian, Miss., was rebuilt during the year.

The passenger depot of the Chattanooga Station Company at Chattanooga, Tenn., is now under construction, and the new union passenger station at Birmingham, Ala., while not completed, was put into service during July, 1907.

The Gadsden Car Works, incorporated in January, 1907, for the purpose of operating the car works at Gadsden, Ala., is now owned jointly by the Alabama Great Southern Railroad Company and the Cincinnati, New Orleans & Texas Pacific Railway Company.

For the usual statistical tables and detailed results of operation see Comptroller's report in pamphlet report.

The accounts of the Company have been audited by Messrs. Price, Waterhouse & Co., chartered accountants, and their certificate as to the correctness thereof as rendered is attached hereto.

Your Directors have to record the death on November 29, 1906, of Mr. Samuel Spencer, who had been a Director and President of the Company since 1885. Memorial Resolutions adopted by the Board at meeting held in New York on December 6, 1906, will be found on page 13 of pamphlet report.

Your Directors also chronicle with sorrow the death of their colleague, Mr. H. Doughty Browne, which occurred at his home in England on January 2, 1907.

The Company also lost by death on December 2, 1906, Mr. George Benson Nicholson, its Chief Engineer, who in that capacity had rendered faithful and efficient service.

The acknowledgments of the Board and of the Stockholders are due to the officers and employees of the Company for the faithful discharge of their duties during the year.

Respectfully submitted, by order of the Board,

W. W. FINLEY,
President.

A. Lowes Dickinson.	Cable Address "Pricewater" New York.	New York.
H. W. Wilmet.	DICKINSON, WILMOT & STERRETT,	Chicago.
G. O. May.	Certified Public Accountants (Ill.),	Philadelphia.
C. J. Marr.	Formerly Jones, Caesar & Co.	St. Louis.
G. R. Webster.	PRICE, WATERHOUSE & CO.,	Pittsburg.
W. E. Seetree.	Chartered Accountants,	San Francisco.
J. E. Sterrett.	54 William Street,	Seattle.
		Mexico, D. F.
		Melbourne.
		London.

New York, September 14, 1907.

To the Shareholders of the Alabama Great Southern Railroad Company:

We have examined the books and accounts of the Alabama Great Southern Railroad Company for the fiscal year ending June 30, 1907, and we hereby certify that, in our opinion, the Balance Sheet and relative Income and Profit and Loss Accounts are properly drawn up so as to show the true financial position of the Company at the close of the year and the results of the operations for the year.

PRICE, WATERHOUSE & CO.,
Chartered Accountants.

TABLE 1.—COMPARATIVE BALANCE SHEET, JUNE 30, 1907, AND JUNE 30, 1906.

Assets.		June 30, 1907.
June 30, 1906.	Cost of Road:	June 30, 1907.
\$12,927,747 17	Cost of Properties to June 30, 1906.....	\$12,927,747 17
	Less adjustment on account of issue of \$134,000 General Mortgage Bonds (\$651,240) to retire \$670,000 Debenture Bonds.....	18,760 00
		\$12,909,087 17
	Additions during the year (see Table 5 of pamphlet report).....	185 38
	Total Cost of Road, June 30, 1907.....	\$12,909,272 55
	Cost of Equipment:	
2,984,936 38	Cost of Equipment to June 30, 1906.....	\$2,984,936 38
	Additions during the year.....	166,846 23
	Total Cost of Equipment, June 30, 1907.....	\$3,151,782 61
\$15,912,083 55	Total Cost of Road and Equipment.....	\$16,060,955 16
\$948,000 00	Trust Equipment.....	\$2,155,000 00
1,479,000 00	Deposit with Trustee for Trust Equipment (Series C).....	\$2,155,000 00
\$2,427,000 00	Total Trust Equipment (per contra).....	\$2,155,000 00
\$1,639,200 66	Miscellaneous Securities Owned-In Treasury.....	\$1,642,687 82
197,933 25	Material and Supplies on Hand (see Table 13 of pamphlet report).....	177,591 40
8,700 67	Insurance Fund in Hands of Trustees.....	2,966 75
	Prepaid Insurance Premiums, etc.....	5,653 26
45,425 00	Sundry Accounts.....	122,507 56
	Current Assets:	
\$191,924 94	Cash:	
	In Banks and on Hand.....	\$327,551 52
	Deposited with Financial Agents for Interest and Rentals, due July 1.....	147,930 09
66,883 79	Remittances in Transit.....	87,337 88
68,656 54	Due from Station Agents and Conductors.....	126,438 74
104,989 15	Due from Other Transportation Companies.....	336,487 35
234,535 10	Due from United States Postoffice Department.....	17,116 98
18,657 15	Due from Individuals and Companies.....	131,001 47
321,401 49		\$1,173,864 63
\$1,007,106 16		\$21,341,235 98
\$21,238,051 39	Liabilities.	
June 30, 1906.	Capital Stock:	June 30, 1907.
\$7,830,000 00	Ordinary, 156,690 shares (par \$50).....	\$7,830,000 00
3,380,350 00	Preferred, 67,607 shares (par \$50).....	3,380,350 00
	Authorized, 80,000 shares.	
	Unissued, 12,393 "	
	Outstanding, 67,607 "	
\$11,210,350 00	Total.....	\$11,210,350 00
	Funded Debt:	
\$1,750,000 00	First Mortgage 6% Bonds.....	\$1,750,000 00
3,207,000 00	General Mortgage 5% Sterling Bonds, equivalent to.....	3,450,000 00
	(See Table 4 of pamphlet report.)	
\$4,957,000 00	Total.....	\$5,200,000 00

Certificates for Funded Arrears of Dividend on Preferred Stock (Interest from July 1, 1892, to February 1, 1906, at 4%, having been added and funded).....

\$319,571 00

Total Capital and Funded Liabilities.....

\$16,730,521 60

Equipment Trust Obligations (per contra).....

\$2,155,000 00

Interest Accrued, not Due:

On General Mortgage Bonds.....

\$14,377 50

Miscellaneous.....

35,641 92

\$49,941 50

Reserves:

For Replacement of Rolling Stock.....

\$543,206 56

For Renewal of Rail.....

46,201 16

For Taxes Accrued, not Due.....

64,232 08

For Miscellaneous.....

13,582 86

\$745,092 51

Reserve for Dividend on Preferred Stock:

3% paid in August, 1906, and 3% payable in August, 1907.....

\$101,410 50

Sundry Accounts.....

20,752 82

Current Liabilities:

Interest and Rentals Due and Unpaid, including those due July 1.....

\$147,930 09

Vouchers and Accounts Payable.....

244,003 54

Unpaid Wages, including June Payroll.....

132,186 63

Due Individuals and Companies.....

103,448 00

Due Other Transportation Companies.....

36,981 49

Bills Payable.....

171,591 65

\$771,081 57

\$576,110 82

Profit and Loss (see Table 3).....

\$780,143 68

\$21,238,051 39

TABLE 2.—INCOME ACCOUNT FOR YEAR ENDED JUNE 30, 1907, COMPARED WITH YEAR ENDED JUNE 30, 1906.

1906.	Gross Earnings:	1907.
\$899,084 73	Passenger.....	\$1,037,574 71
2,463,917 76	Freight.....	2,629,827 01
71,498 70	Mail.....	67,140 48
83,547 03	Express.....	106,606 17
256,572 24	Miscellaneous.....	327,329 96
\$3,774,620 46		\$4,168,478 33
	Operating Expenses and Taxes:	
\$611,904 39	Maintenance of Way and Structures.....	\$707,396 67
871,309 50	Maintenance of Equipment.....	914,448 58
1,387,276 85	Conducting Transportation.....	1,553,128 65
92,674 88	General Expenses.....	116,909 21
98,701 20	Taxes.....	114,671 12
\$3,061,866 82		\$3,406,554 23
\$712,753 64	Net Earnings from Operation.....	\$761,924 10
	Income from Investments:	
\$8,869 20	Interest on Belt Railway Company of Chattanooga Bonds owned by this Company.....	\$55,038 03
44,440 00	Miscellaneous Income from other sources.....	55,038 03
\$53,309 20		\$55,038 03
\$766,062 84		\$816,962 13
	Miscellaneous Deductions from Income:	
\$8,421 81	Expenses of English Company.....	\$14,642 12
650 34	English Income Tax.....	125 83
103 58	Exchange Account.....	64,987 45
61,109 59	Interest on Equipment Trust Obligations.....	23,897 22
1,071 61	Interest and Commissions.....	
\$71,356 93		\$103,752 62
\$694,705 91	Total Available Income.....	\$713,209 51
	Fixed Charges, including Rentals:	
\$104,940 00	First Mortgage Bonds, 6%.....	\$104,940 00
146,812 50	General Mortgage Bonds, 5%.....	168,243 75
23,120 79	Debentures, 6%.....	
13,750 00	Belt Railway Co. of Chattanooga, 1st Mortgage Bonds, 5% (net).....	11,633 31
960 00	Belt Railway Co. of Chattanooga, 2d Mortgage Bonds, 4% (net).....	940 80
6,657 74	Interest on Funded Arrears of Dividend.....	13,774 16
\$296,241 03		\$299,532 02
\$398,464 88	Balance of Income over Charges.....	\$413,677 49
	From which Deduct:	
	Dividends on Preferred Stock:	
	3% in February, 1906; 3% in February, 1907,	
	and Reserves for 3% in August, 1906, and	
	3% in August, 1907.....	\$202,821 00
\$195,052 96		
\$203,411 92	Balance Carried to Credit of Profit and Loss for the Year.....	\$210,856 49

TABLE 3.—PROFIT AND LOSS ACCOUNT FOR YEAR ENDED JUNE 30, 1907.

Balance at Credit of this Account June 30, 1906.....	\$576,110 82
Add:	
Credit Balance of Income Account for year ended June 30, 1907.....	\$210,856 49
Less:	
Net Miscellaneous Debits.....	6,823 63
	\$204,032 86
Credit Balance June 30, 1907.....	\$780,143 68

TABLE 4.—TRAFFIC STATISTICS, YEARS ENDED JUNE 30, 1907 AND 1906.

	1907.	1906.	Percent of Inc. or Dec.
Miles of Road Operated.....	309.41	309.41	
Passenger Traffic:			
Number of passengers carried.....	705,463	614,788	Inc. 14.75
Number of passengers carried one mile.....	42,469,782	38,129,514	Inc. 11.38
Average distance hauled per passenger..... (Miles)	60.20	62.02	Dec. 2.93
Total revenue from passengers.....	\$1,037,574.71	\$899,084.73	Inc. 15.10
Average receipts per passenger per mile..... (Cents)	2.44	2.36	Inc. 3.39
Total passenger-train earnings.....	\$1,225,063.29	\$1,069,009.05	Inc. 14.66
Passenger-train earnings per mile of road.....	\$3,961.30	\$3,454.99	Inc. 14.66
Average number of passengers, in each train.....	11,4734	11,3645	Inc. 7.98
Average number of passengers in each car.....	51.06	48.67	Inc. 4.91
Average number of passengers in each loaded car.....	12.69	12.32	Dec. 1.87
Freight Traffic:			
Revenue Freight Only:			
Number of tons carried.....	2,945,372	2,988,523	Dec. 1.44
Number of tons carried one mile.....	361,749,960	365,746,718	Dec. 1.09
Average distance hauled per ton..... (Miles)	122.82	122.38	Inc. 0.36
Total freight-train earnings.....	\$2,629,827.01	\$2,463,917.76	Inc. 6.73
Average receipts per ton per mile..... (Cent)	0.73	0.67	Inc. 8.96
Freight-train earnings per mile of road.....	\$8,499.49	\$7,963.28	Inc. 6.73
Freight-train earnings per train mile.....	\$2,6550	\$2,4812	Inc. 7.00
Average number of tons of freight in each train.....	365.21	368.31	Dec. 0.84
Average number of tons of freight in each loaded car.....	18.84	18.88	Dec. 0.21
All Freight, including Company's material hauled free:			
Number of tons carried.....	3,083,806	3,122,804	Dec. 1.25
Number of tons carried one mile.....	372,256,750	375,257,895	Dec. 0.80
Average number of tons of freight in each train.....	375.81	377.89	Dec. 0.55
Average number of tons of freight in each loaded car.....	19.40	19.37	Inc. 0.15
Earnings and Expenses:			
Passenger and freight-train earnings.....	\$5,855,490.30	\$5,532,926.81	Inc. 9.13
Passenger and freight-train earnings per mile of road.....	\$18,460.78	\$17,881.27	Inc. 9.13
Gross earnings.....	\$4,168,478.33	\$3,774,620.46	Inc. 10.43
Gross earnings per mile of road.....	\$13,472.35	\$12,199.41	Inc. 10.43
Gross earnings per revenue train mile.....	\$2,2874	\$2,1248	Inc. 7.65
Operating expenses and taxes.....	\$3,406,554.23	\$3,661,866.82	Inc. 11.36
Operating expenses and taxes per mile of road.....	\$11,009.84	\$11,866.82	Inc. 11.36
Operating expenses and taxes per revenue train mile.....	\$11,8668	\$12,7286	Inc. 8.45
Net earnings.....	\$761,924.10	\$771,753.64	Inc. 6.90
Net earnings per mile of road.....	\$2,462.51	\$2,303.59	Inc. 6.90
Net earnings per revenue train mile.....	\$0.4181	\$0.4012	Inc. 4.21

FIFTY-NINTH ANNUAL REPORT OF THE Mobile & Ohio Railroad Company, Year Ended June 30, 1907.

New York, October 1, 1907.

To the Bondholders and Stockholders of the Mobile & Ohio Railroad Company:

The President and Board of Directors submit the following report of the operations of the Company for the year ended June 30, 1907:

MILEAGE OPERATED.			
Lines Owned.....	767.48 miles.		
Lines Leased: St. Louis & Cairo Railroad.....	158.60 "		
Total.....	926.08 "		

INCOME ACCOUNT.			
	1907.	1906.	Increase.
Gross Earnings from Operation.....	\$10,759,519 29	\$9,445,927 59	\$1,313,591 70
Operating Expenses and Taxes.....	7,643,087 51	6,545,434 53	1,097,652 98
Net Earnings from Operation.....	\$3,116,431 78	\$2,900,493 06	\$215,938 72
Income from Other Sources.....	123,430 00	124,810 00	Dec. 1,380 00
Total Income.....	\$3,239,861 78	\$3,025,303 06	\$214,558 72
Interest and Rentals.....	\$1,905,969 02	\$1,815,484 93	\$90,484 09
Other Charges against Income.....	612,653 53	716,127 66	Dec. 103,474 13
Total Deductions.....	\$2,518,622 55	\$2,531,612 59	Dec. \$12,990 04
Balance of Income over Charges.....	\$721,239 23	\$493,690 47	\$227,548 76
Dividend on Stock 1907, 5%; 1906, 3%.....	301,030 00	301,030 00	
Balance carried to Credit of Profit and Loss.....	\$420,209 23	\$192,660 47	\$227,548 76

Increase in Interest and Rentals:

The increase of \$90,484.09 in Interest and Rentals consists of:
Increase in Rental due under terms of lease with St. Louis & Cairo Railroad Company, the entire capital stock of which, except a few shares, is pledged by the Mobile & Ohio Railroad Company under its St. Louis & Cairo Collateral Trust Bonds.....\$60,380 69
Increase in interest upon Equipment Trust Obligations, etc.....30,103 40

For other details of Income Account see Table 2.

Profit and Loss Account:

The Balance standing at Credit of this Account June 30, 1907, was.....\$2,167,552 55
The Balance standing at Credit of this Account June 30, 1906, was.....1,769,440 51

Increase for fiscal year ended June 30, 1907.....\$398,112 44

For details of Profit and Loss Account see Table 3.

FINANCIAL CONDITION.

The Financial Condition of the Company on June 30, 1907, is shown in the Comparative Balance Sheet, Table 1.

Funded Debt and Equipment Trust Obligations:

Outstanding June 30, 1906:
Funded Debt.....\$24,172,000 00
Equipment Trust Obligations.....4,421,164 42
Total.....\$28,593,164 42

Outstanding June 30, 1907:
Funded Debt.....\$24,172,000 00
Equipment Trust Obligations.....4,337,600 04
Total.....\$28,509,600 04

Decrease for year ended June 30, 1907.....\$83,564 38

Additions During the Year:
Equipment Contract "ACF," 8.....\$505,912 42
Less allowed on exchange of old equipment.....90,000 00
Equipment Agreement "BLW".....\$397,176 89
Less Cash payment.....95,246 25
Total.....\$445,912 42

Less Payments:
Series "Q".....\$60,000 00
"ACF" (1).....55,667 40
"ACF" (2).....36,983 84
"ACF" (5).....41,839 59
"ACF" (6).....52,163 40
"ACF" (7).....52,375 65
"ACF" (8).....78,631 23
"C & A".....19,000 00
"C".....178,000 00
"D".....68,000 00
"E".....32,000 00
"BLW".....37,741 33
Total.....\$31,407 44

Net Decrease as above.....\$83,564 38

Equipment Obligations "ACF" (8) cover the deferred payments upon 600 Gondola Cars purchased during the current year for renewal of retired equipment, and in part payment for which a like number of unserviceable cars of light construction and capacity were delivered to the manufacturers under contract dated July 23, 1906. The balance of the cost is represented by monthly notes payable in three years:

Cost of equipment.....\$505,912 42
Less contract value of old cars.....60,000 00

Amount for which notes were issued.....\$445,912 42

Equipment Obligations "BLW" cover the deferred payments upon 25 Locomotives purchased during the current year from the Baldwin Locomotive Works under agreement dated February 12, 1907, payment for which is to be made as follows:

Total cost.....\$397,176 89
Cash payment made.....95,246 25

Equipment Obligations issued:
Payable in eight quarterly instalments, bearing 5 per cent. interest, first instalment due April 12, 1907.....\$301,930 64

The following equipment has been purchased and received during the year under terms and conditions of Equipment Agreements, Series "A" and "B" Sinking Funds:

Series "A." 15 Way Cars.....\$19,725 00
1 Passenger Coach.....9,600 00
Total.....\$29,325 00

Series "B." 4 Way Cars.....\$5,260 00
9 Passenger Coaches.....86,400 00
Total.....\$91,660 00

Total.....\$120,985 00

During the year arrangements have been made for the purchase upon satisfactory terms of 1000 Box Cars and 750 Gondola Cars, to be delivered in October, November and December, 1907.

Cost of Road:

This account has been charged during the year with the following amounts:
Cost of real estate at various places.....\$3,425 00
Cost of wharf property at Mobile, Ala.....50,671 92
Proportion of principal paid on account of Equipment Trusts "D" and "E" and Equipment Obligations "BLW".....\$54,086 92
Total.....\$147,707 92

Less:

Proceeds from sale of property on Beauregard Street, Mobile, Ala.....\$96,245 00
Property transferred to Meridian Terminal Company.....5,350 00
Total charged to Capital Account for the year.....\$101,595 00

Total charged to Capital Account for the year.....\$101,595 00

Reserve Accounts:

The amounts standing at credit of Reserve Accounts on June 30, 1907, as compared with the previous year, were as follows:

	1907.	1906.
For Renewal of Equipment.....	\$71,673 85	\$118,091 45
For Renewal of Bridges.....	31,866 94	51,359 06
For Miscellaneous.....	103,660 79	123,066 15
Total.....	\$207,191 58	\$292,516 65

OPERATING ACCOUNTS.

The Earnings and Expenses for the year ended June 30, 1907, in comparison with those of the previous year, were as follows:

	1907.	1906.	Increase.	Per cent. of Inc.
Gross Earnings:				
Passenger.....	\$1,250,326 19	\$1,042,765 35	\$207,560 84	19.90
Freight.....	8,073,973 01	7,124,588 21	949,384 80	13.33
Mail.....	119,303 35	122,201 94	2,898 59	2.37
Express.....	253,805 75	225,160 75	28,645 00	12.72
Total.....	\$10,759,519 29	\$9,445,927 59	\$1,313,591 70	13.91
Operating Expenses and Taxes:				
Maintenance of Way and Structures.....	\$1,380,106 36	\$1,312,624 08	\$67,482 28	5.14
Maintenance of Equipment.....	1,494,131 85	1,144,800 31	349,331 54	30.51
Conducting Transportation.....	4,224,129 38	3,624,561 43	599,567 95	16.53
General Expenses and Taxes.....	544,719 92	463,068 71	81,651 21	17.64
Total.....	\$7,643,087 51	\$6,545,434 53	\$1,097,652 98	16.77
Net Earnings.....	\$3,116,431 78	\$2,900,493 06	\$215,938 72	7.45

Ratio of Operating Expenses and Taxes to Gross Earnings.....71.04% 69.29% 1.75%

For full details of Gross Earnings and Operating Expenses see Table 6, page 20 of pamphlet report.

The tonnage movement for the year, in comparison with the previous year, was as follows:

	Tons.	Ton-miles.	Average haul.
1907.....	5,326,063	1,302,991,226	24.65
1906.....	4,745,783	1,114,905,371	23.48
Increase.....	580,280	188,085,855	9.72

The Expenses of Maintenance of Way and Structures per mile of road for the year were \$190.27, as compared with \$147.40 for the year preceding. The number of cross-ties placed in the track during the year was 387,884, as compared with 431,910 for the year previous.

The following new steel bridges were erected during the year:

Name of stream.	Type of bridge.	Length of span.
Buckatunna Creek.....	Through Steel Truss.....	125 feet.
Shubuta Creek.....	" " " ".....	125 "
Chickasaw River.....	" " " ".....	200 "
Okaw River.....	" " " ".....	200 "
Limestone Creek.....	Concrete Arch.....	91 "

All iron bridges on the main line between East St. Louis, Ill., and Mobile, Ala., to cover the renewal of which bridge reserve has heretofore been created, have been replaced by steel structures of modern design, and the reduction of grades and curvature between Jackson, Tenn., and Corinth, Miss., for which miscellaneous reserve has heretofore been created, was on June 30, 1907, practically completed.

During the year 4.5 miles of 85-pound and 14.5 miles of 75-pound steel rail have been put in the track, replacing a like number of miles of 70-pound rail.

The rail in main line and branches June 30, 1907, was as follows:

Weight.	Main line.	Branches.
	Miles.	Miles.
40-pound.....	1.48
50-pound.....	6.68
56-pound.....	34.56
60-pound.....	173.42	49.42
70-pound.....	206.00	8.55
75-pound.....	427.87	13.60
85-pound.....	4.50
Total.....	811.79	114.29

There were on hand at the close of the year 284 tons of new 75-pound steel rail, 2114 tons of serviceable relaying rail and 284 tons of scrap rail.

During the year 10.55 miles of additional sidings were constructed, as compared with 12.98 miles during the preceding year.

The average amounts expended and charged to Maintenance of Equipment for repairs and replacement of rolling stock during the year were as follows:

	1907.	1906.
Per Locomotive.....	\$1,713 63	\$1,790 26
Per Passenger Car.....	712 16	700 76
Per Freight Car.....	*82 01	49 48

*Includes proportion of cost of substituting 1200 new cars for like number of old ones.

The expenses of Conducting Transportation increased \$599,177.95, or 16.53 per cent., which increase was largely due to the higher cost of both labor and material.

General Expenses and Taxes increased \$81,661.21, or 17.64 per cent.

EQUIPMENT.

The equipment on hand at the close of the year, as shown in Table 12, page 26 of pamphlet report, consisted of:

Locomotives.....	246
Passenger-Train Cars.....	125
Freight-Train Cars.....	969
Road-Service Cars.....	445

Being, in comparison with previous year:

Increase in Locomotives.....	24
Increase in Passenger-Train Cars.....	1
Increase in Freight-Train Cars.....	12
Increase in Road-Service Cars.....	64

The list of equipment includes the following owned by the Warrior Southern Railway Company, of which corporation the Mobile & Ohio Railroad Company owns the entire capital stock and bonds:

Engine.....	1
Passenger Cars.....	2
Gondola Cars.....	290

Of the equipment the following are subject to Equipment Trust Liens: 130 engines, 12 passenger cars, 7 baggage and mail cars, 1 dining car, 3945 box cars, 600 fruit cars, 3375 gondolas, 100 hopper coal cars, 34 way cars, 150 ballast cars, 150 furniture cars, 150 stock cars and 75 flat cars.

On June 17, 1905, the Gulf Terminal Company was incorporated under the laws of the State of Alabama for the purpose of erecting a modern union passenger station in the City of Mobile, which has since been built and was formally put in use on April 18, 1907. The Terminal Company has authorized an issue of \$700,000 First Mortgage Four Per Cent. Fifty-Year Bonds, dated January 1, 1907, which have been jointly and severally guaranteed, principal and interest, by the Southern Railway Company and Mobile & Ohio Railroad Company, which Companies are equally interested in the ownership of the stock of the Terminal Company.

The proceeds derived from the sale of the bonds of the Terminal Company were used to acquire necessary real estate for and to construct and equip its railroad, union passenger station and terminal facilities in the City of Mobile.

Southern Railway Company, Mobile & Ohio Railroad Company, New Orleans & North-eastern Railroad Company, Alabama & Vicksburg Railway Company and Alabama Great Southern Railroad Company, the five lines interested in the formation of the Meridian Terminal Company, have guaranteed, jointly and severally, the due and punctual payment of the interest on \$250,000 First Mortgage Four Per Cent. Fifty-Year Bonds of the Terminal

Company, dated May 1, 1906. The money realized from the sale of these bonds was used in acquiring necessary real estate for and the construction and equipment of the Terminal Company's union passenger station and facilities in the City of Meridian, Miss.

For the usual statistical tables and detailed results of operation see Auditor's report in pamphlet report.

The accounts of the Company have been audited by Messrs. Haskins & Sells, certified public accountants, and their certificate in respect thereto is attached.

The Board of Directors records the death on November 29, 1906, of Mr. Samuel Spencer, who was elected a Director and President of the Company on March 20, 1901. Memorial resolutions adopted by the Board at a meeting held in New York on December 6, 1906, will be found on page 11 of pamphlet report.

The Board of Directors renews its acknowledgments to the officers and employees for the faithful discharge of their duties during the year.

Respectfully submitted, by order of the Board.

W. W. FINLEY,
President.

HASKINS & SELLS,
Certified Public Accountants,
30 Broad St., New York.

London, E. C.: 30 Coleman Street. Cable Address, "Haskinsells."

Chicago: 294 Dearborn St. St. Louis: Lincoln Trust Building. Cleveland: Williamson Building. Pittsburg: Farmers' Bank Building.
New York, September 19, 1907.

Mr. W. W. Finley, President Mobile & Ohio Railroad Company, Washington, D. C.:
Dear Sir:—We have made an audit of the books, records and accounts of the Mobile & Ohio Railroad Company for the fiscal year ended June 30, 1907; have checked from original and authorized sources of entry all revenues and expenditures and all items entering into the Income Account, and have verified the Cash Account and other current assets.

We have verified the securities of the Company in the hands of the Treasurer, the Chairman of the Board and the various Trustees, either by actual count or by certificates of custodians; have examined the property and capital accounts, and

We hereby certify that the attached General Balance Sheet correctly sets forth the financial condition of the Company on June 30, 1907, and that the accompanying Summaries of Income and Profit and Loss Accounts are correct, and that the books of the Company are in agreement therewith.

Yours truly,

HASKINS & SELLS,
Certified Public Accountants.

TABLE 1.—COMPARATIVE BALANCE SHEET, JUNE 30, 1907, AND JUNE 30, 1906.

Assets.		June 30, 1906.	June 30, 1907.
Cost of Road:			
Cost of Properties to June 30, 1906.....		\$28,072,499 32	\$28,072,499 32
Additions during the year (see page 6 of pamphlet report).....			127,209 84
Total Cost of Road June 30, 1907.....			\$28,199,709 16
Real Estate—Donated Lands.....			120,548 49
Trust Equipment (per contra).....			4,337,680 04
Treasury Stock:			
16,594 Shares Mobile & Ohio Railroad Company Common Stock (per contra).....			\$1,559,400 00
Securities in Hands of Trustees:			
General Mortgage Bonds of 1888 (to take up Debentures and General Mortgage Bond Coupon Scrip).....			\$2,000 00
St. Louis & Cairo Collateral Bonds (to acquire St. Louis & Cairo Railroad Company Stock).....			3,000 00
St. Louis & Cairo Railroad Company Stock, \$6,492,000 par value (pledged for Bonds, etc.).....			2,164,000 00
Mobile & Ohio Railroad Company Assented Stock (to exchange for Provisional Certificates).....			9,400 00
Total.....		\$2,180,400 00	\$2,178,400 00
Securities Owned—in Treasury.....		\$1,460,880 00	\$1,504,570 00
Material and Supplies (see Table II, page 25 of pamphlet report).....		351,493 72	371,786 55
Rail and Fixtures Leased.....		35,881 65	42,956 86
Insurance and Interest Paid in Advance.....		19,072 63	12,186 24
Insurance Fund—Cash and Securities Owned.....		9,738 27	11,677 69
Miscellaneous Assets:			
Advances to Subsidiary Companies.....		\$70,883 98	\$152,014 01
Unadjusted Accounts.....		125,199 72	117,067 56
Total.....		\$196,083 70	\$269,081 96
Current Assets:			
Cash.....		\$327,854 51	\$198,370 75
Deposits to meet Matured Coupons, Dividends and Equipment Trust Obligations.....		145,300 50	143,277 50
Due by Station Agents.....		437,239 47	552,314 51
Traffic Balances and Claims due by Connections.....		168,180 37	191,501 76
Due by Individuals and Companies.....		901,942 05	1,018,859 94
Bills Receivable, Cash, etc., Land Department.....		137,144 63	170,707 80
Bills Receivable, Cash, etc., Land Department.....		414,519 89	440,046 51
Equipment Trust Sinking Funds (uninvested).....		55,549 97	26,750 47
Total.....		\$2,627,731 39	\$2,741,558 34
Liabilities.			
Capital Stock (Authorized \$10,000,000):			
60,796 Shares (par \$100).....		\$6,070,600 00	\$6,070,600 00
16,594 Shares (par \$100) in Treasury (per contra).....		1,559,400 00	
Total Outstanding.....		\$7,730,000 00	\$7,730,000 00
Funded Debt:			
First Mortgage Six Per Cent. Bonds.....		\$7,000,000 00	\$7,000,000 00
First Mortgage Extension Six Per Cent. Bonds.....		1,900,000 00	1,000,000 00
General Mortgage Four Per Cent. Bonds.....		9,472,000 00	9,472,000 00
First Mortgage Montgomery Division Five Per Cent. Bonds.....		4,000,000 00	4,000,000 00
St. Louis & Cairo Collateral Four Per Cent. Bonds.....		2,500,000 00	2,500,000 00
Mobile & Bay Shore Railway Company First Mortgage Five Per Cent. Bonds.....		200,000 00	200,000 00
Total.....		\$24,172,000 00	\$24,172,000 00
Preferred Income and Sinking Fund Debentures:			
Issue of 1879.....		\$8,650,000 00	\$8,650,000 00
Less:			
1906.....		\$1,758,300	\$1,758,300
Retired through Sinking Fund.....		6,890,300	6,890,300
Pledged under General Mortgage.....			6,890,300
Total.....		\$6,841,600 00	\$6,841,600 00
Outstanding.....		\$1,400 00	\$1,400 00
Equipment Trust Obligations (per contra).....		\$4,421,164 42	\$4,337,680 04
Mobile & Ohio Railroad Provisional Certificates, outstanding.....		\$10,900 00	\$9,400 00
Reserves:			
For Renewal of Equipment.....		118,091 45	71,673 35
For Renewal of Bridges.....		51,359 05	
For Miscellaneous.....		123,068 15	31,896 94
Total.....		\$292,516 65	\$103,660 79
Deferred Liabilities Accrued, not Due:			
Interest on Bonds.....		\$277,959 99	\$277,959 99
Interest on Equipment Trust Obligations.....		54,388 87	50,750 91
Principal of Equipment Trust Bonds.....		215,046 55	144,061 55
Taxes.....		83,000 00	90,000 00
Total.....		\$630,395 41	\$562,772 45
Current Liabilities:			
Audited Vouchers.....		\$612,867 26	\$853,657 35
Audited Payrolls.....		306,597 53	385,295 98
Due Individuals and Companies.....		370,573 06	389,008 96
Traffic Balances Due Connections.....		90,934 61	127,647 41
Drafts of Station Agents, not presented.....		43,459 55	96,344 51

42,772 50	Bond Interest, due and unpaid.....	35,697 50
38,543 00	Dividends unpaid.....	50,310 00
591,949 43	Bills Payable.....	183,997 46
73,090 09	Due St. Louis & Cairo Railroad Company.....	233,530 33
\$2,130,787 03	Total.....	\$2,365,489 50
\$1,769,440 51	Profit and Loss (see Table 3).....	\$2,167,562 96
\$41,158,604 02		\$41,449,875 73

TABLE 2.—INCOME ACCOUNT FOR YEAR ENDED JUNE 30, 1907, COMPARED WITH YEAR ENDED JUNE 30, 1906.

1906.	Gross Earnings:	1907.
\$1,042,765 35	Passenger.....	\$1,250,326 19
7,124,588 21	Freight.....	8,073,973 01
122,301 94	Mail.....	119,303 35
225,160 75	Express.....	253,805 75
931,211 34	Miscellaneous.....	1,062,110 89
\$9,445,927 59		\$10,759,519 29
	Operating Expenses and Taxes:	
\$1,312,624 08	Maintenance of Way and Structures.....	\$1,380,166 36
1,144,800 31	Maintenance of Equipment.....	1,494,131 85
3,624,951 43	Conducting Transportation.....	4,224,129 38
283,370 35	General Expenses.....	341,546 77
179,688 36	Taxes.....	393,173 15
6,545,434 53		7,643,087 51
\$2,900,493 06	Net Earnings from Operation.....	\$3,116,431 78
	Income from Other Sources:	
\$97,380 00	Dividend, 1½% on St. Louis & Cairo Railroad Company Stock.....	\$97,380 00
27,430 00	Miscellaneous Interest and Dividends.....	26,050 00
124,810 00		123,430 00
\$3,025,303 06		\$3,239,861 78
	Miscellaneous Deductions from Income:	
\$598,872 32	Principal of Equipment Trusts, chargeable to Income.....	\$427,640 46
	New Yard at Jackson, Tenn.....	54,280 54
	New Yard at Murphysboro, Ill.....	1,040 85
24,032 64	Change of Line at Wickliffe, Ky.....	25,486 09
	Reducing Grades and Curvature.....	27,294 28
93,222 70	New Side Tracks, etc.....	76,911 31
716,127 66		612,653 54
\$2,309,175 40	Total Available Income.....	\$2,627,208 25
	Fixed Charges, including Rentals:	
\$420,000 00	Interest on First Mortgage Bonds.....	\$420,000 00
378,880 00	Interest on General Mortgage Bonds.....	378,880 00
60,000 00	Interest on First Mortgage Extension Bonds.....	60,000 00
200,000 00	Interest on Montgomery Division Bonds.....	200,000 00
10,000 00	Interest on Mobile & Bay Shore Rwy. Bonds.....	10,000 00
24,120 00	Interest on Warrior Southern Railway Bonds.....	24,120 00
100,000 00	Interest on St. Louis & Cairo Railway Collateral Bonds.....	100,000 00
181,595 29	Interest on Equipment Trusts, etc.....	211,698 69
440,889 64	Rental St. Louis & Cairo Railroad.....	501,270 33
1,815,484 93		1,905,969 02
\$493,690 47	Balance of Income Over Charges.....	\$721,239 23
301,030 00	Dividends on Stock: 1907, 5%; 1906, 5%.....	301,030 00
\$192,660 47	Balance carried to Credit of Profit and Loss for the Year.....	\$420,209 23

TABLE 3.—PROFIT AND LOSS ACCOUNT FOR YEAR ENDED JUNE 30, 1907.

Balance at Credit of this Account June 30, 1906.....	\$1,769,449 51
Add:	
Credit Balance of Income Account for year ended June 30, 1907.....	\$420,209 23
Profit, Land Department.....	13,573 11
	\$433,782 34
Deduct:	
Sundry Net Debits.....	35,669 90
	\$398,112 44
Credit Balance, June 30, 1907.....	\$2,167,552 96

TABLE 3.—PROFIT AND LOSS ACCOUNT FOR YEAR ENDED JUNE 30, 1907.

Balance at Credit of this Account June 30, 1906.....	\$1,769,440 51
Add:	
Credit Balance of Income Account for year ended June 30, 1907.....	\$420,209 23
Profit, Land Department.....	13,573 11
	\$433,782 34
Deduct:	
Sundry Net Debits.....	35,669 90
	\$398,112 44
Credit Balance, June 30, 1907.....	\$2,167,562 96

TABLE 4.—TRAFFIC STATISTICS, YEARS ENDED JUNE 30, 1907 AND 1906.

	1907.	1906.	Percent. of Inc. or Dec.
Miles of road operated.....	926.08	926.08	
Passenger Traffic:			
Through passengers carried.....	73,673	65,529	Inc. 12.43
Through passengers carried one mile.....	10,735,780	11,781,575	Dec. 8.87
Per cent. of total mileage.....	20.38	25.67	Dec. 20.61
Average miles per passenger.....	143.72	170.63	Dec. 14.60
Local passengers carried.....	1,302,836	1,090,190	Inc. 19.51
Local passengers carried one mile.....	41,938,483	34,106,910	Inc. 22.37
Per cent. of total mileage.....	79.62	74.33	Inc. 7.12
Average miles per passenger.....	32.18	31.28	Inc. 2.88
Total passengers carried.....	1,376,509	1,155,719	Inc. 19.11
Total passengers carried one mile.....	52,675,263	45,887,485	Inc. 14.79
Average miles per passenger.....	38.26	39.70	Dec. 3.83
Average receipts per passenger per mile, (Cents).....	2.37	2.27	Inc. 4.40
Freight Traffic:			
North, tons carried.....	2,711,584	2,301,789	Inc. 23.15
North, tons carried one mile.....	694,692,639	588,660,481	Inc. 18.01
Per cent. of total mileage.....	53.31	52.80	Inc. .97
Average miles per ton.....	256.19	267.35	Dec. 4.17
South, tons carried.....	2,614,419	2,543,394	Inc. 2.77
South, tons carried one mile.....	608,298,587	526,244,890	Inc. 15.59
Per cent. of total mileage.....	46.69	47.20	Dec. 1.08
Average miles per ton.....	232.67	206.86	Inc. 12.47
Total tons carried.....	5,326,003	4,745,783	Inc. 12.23
Total tons carried one mile.....	1,302,961,226	1,114,905,371	Inc. 16.87
Average miles per ton.....	244.65	234.93	Inc. 4.14
Average receipts per ton per mile, (Cent).....	0.620	0.639	Dec. 2.97
Average number tons per train (revenue freight only).....	274.60	250.51	Inc. 9.62
Cotton Traffic:			
Bales.....	396,416	356,132	Inc. 10.63
Revenue.....	\$408,696.66	\$304,501.74	Inc. 34.22
Coal Traffic:			
Tons.....	992,506	724,506	Inc. 36.99
Revenue.....	\$496,714.45	\$322,551.40	Inc. 53.99
Passenger revenue, through.....	\$233,168.80	\$217,804.30	Inc. 7.06
Passenger revenue, local.....	1,017,157.39	824,961.05	Inc. 23.29
Total Passenger Revenue.....	\$1,250,326.19	\$1,042,765.35	Inc. 19.80
Freight revenue, north.....	\$3,820,717.07	\$3,415,904.33	Inc. 11.85
Freight revenue, south.....	4,253,355.94	3,708,683.88	Inc. 14.98
Total Freight Revenue.....	\$8,073,973.01	\$7,124,588.21	Inc. 13.32
Mail.....	119,303.35	122,301.94	Dec. 2.37
Express.....	253,805.75	225,160.75	Inc. 12.72
Miscellaneous.....	1,062,110.89	931,211.34	Inc. 14.06
Total Revenue.....	\$10,759,519.29	\$9,445,927.59	Inc. 13.91
Gross earnings per mile of road.....	\$11,618.34	\$10,189.90	Inc. 13.90
Operating expenses and taxes per mile of road.....	8,253.16	7,067.89	Inc. 16.77
Net earnings per mile of road.....	3,365.18	3,132.01	Inc. 7.44
Train Mileage:			
Passenger trains.....	1,636,041	1,355,408	Inc. 20.70
Freight trains.....	4,744,893	4,450,614	Inc. 6.61
Construction trains.....	479,123	298,687	Inc. 47.02
Switching.....	1,454,540	1,333,518	Inc. 9.06
Total Train Mileage.....	8,274,597	7,438,527	Inc. 11.24
Freight Engine Mileage:			
Trains.....	4,744,893	4,450,614	Inc. 6.61
Helping.....	505,035	374,311	Inc. 34.92
Total Freight Engine Mileage.....	5,249,928	4,824,925	Inc. 8.91

[Continued from Page 81.]

States, including some important structures. The demand for Robinson architectural effects in Florida has proven so urgent recently that Mr. Robinson has established offices there in the Masonic Temple, Jacksonville, Fla.

New Wesco Department.

The Wesco Supply Co. of St. Louis, Mo., and Ft. Worth, Texas, announces it has established a new department, devoted strictly to incandescent lamps. Owing to the increased demand for Peerless lamps it was found essential to add this department, which places the Wesco Supply Co. in a position to give the lamp business closer attention. The department is open to the trade, who, it is hoped, will avail themselves of the opportunity to consult this department freely for such information as may be desired.

Important Contracts of Houston Co.

Numerous are the construction contracts awarded in the South during the year, and many of them are of great importance, both as to extent and character. The Huston Engineering Co., 613 Machea Building, New Orleans, La., is securing a share of the awards for construction work, its present contracts including some six or seven streets, amounting to \$110,000, in New Orleans, and the engineering and constructing work for the Bayou Teche Railway & Light Co.'s proposition, amounting to power station, substation and about 17 miles of track, estimated to cost \$450,000.

Electricity in South America.

Another step in the development of South America is recorded in cable dispatches from San Paulo, Brazil, announcing that the Government has accepted the bid of Guinle & Co. of New York city to furnish electric power in San Paulo. The electric current will at first be used for operating the public water-works system, and later for lighting purposes. Steam plants are very expensive in Brazil, owing to the scarcity of coal, and electricity generated by water-power at a distance has been the solution of the power question. The action of the Brazilian Government in giving this important contract to an American firm is regarded as of the greatest importance in the development of San Paulo and other cities in that country.

General Electric Co.

At a meeting of the managers of the General Electric Co. of Schenectady, N. Y., the satisfactory condition of the company's business was indicated by a statement that orders received during the current year to date exceeded those of the corresponding period of last year by at least 15 per cent. The volume of orders and prospective demand for smaller electrical devices which the company manufactures are also very satisfactory. Dr. Thomas Addison, manager of the Pacific coast territory, reported a recent order for a Curtis steam turbine generator of unusual size. The machine is one of the largest ever built for electrical purposes, and will have a normal capacity of 20,000 horse-power. It is stated that the company's foreign business continues to show gratifying increase.

General Fireproofing Co.

The General Fireproofing Co. announces the removal of its Washington (D. C.) offices from 420 Colorado Building and 501 14th street to 735 14th street N. W., corner of New York avenue. It extends an invitation to visit and inspect the new offices, where samples of the highest grades of steel furniture and materials for reinforcing concrete and fireproofing may be seen, and full information obtained relative to Allsteel furniture and filling equipment, pin-connected girder frames, cold-twisted lug bars, expanded metal, trussit metal, herringbone expanded steel lath, key-expanded metal lath, Gendre expanded metal lath, Boston steel lath, Allunited steel studding and Universal corner head. Main offices and works, Youngstown, Ohio; branch offices at New York, Boston, Philadelphia, Chicago, St. Louis, San Francisco and New Orleans. Mr. W. A. Kennedy is district manager in Washington.

Burroughs Business Systems Bureau.

The Burroughs business systems department is devoted to making accounting work easier and more profitable and is conducted on an educational basis by the Burroughs Adding Machine Co. at its general offices in Detroit, Mich. The company states it expects about \$60,000 per year for the maintenance of this department, making no charge for its services, at the same time not regarding it as philanthropic, as it increases

the sale of the Burroughs machines. Book-keeping forms, ledger sheets, tabulated reports, statements, etc., showing the actual work of the Burroughs machines and adapted to the widest use are prepared and distributed. There are forms especially for banks, retail stores, jobbing houses, cotton mills, leather houses, brokers, lumber mills, steel mills, State and municipal officials, hotels, restaurants, insurance offices, warehouses, railroad offices, etc., in addition to the general forms used in every line of business, such as the Burroughs short cuts to trial balances, Burroughs cash-received system, Burroughs daily proof-of-posting system, and others. The benefits of the Burroughs business systems department are at the service of any firm or individual interested in modern business methods.

TRADE LITERATURE.

Railway Shops Completed.

The Pittsburg (Kan.) shops of the Kansas City Southern Railway Co., designed and constructed by the Arnold Company, electrical, civil and mechanical engineers and constructors, of 181 La Salle street, Chicago, have recently been completed. A photograph of the interior of the plant is shown on a post card being distributed.

Coal and Ash-Handling Machinery.

Mechanical equipment for handling coal and ashes for power plants comprises a class of machinery which is being given more attention every day. Managers of large establishments where coal and ashes need to be handled in the most efficient manner and economically will find the subject of machinery for the purpose illustrated in catalogue D of the Jeffrey Manufacturing Co. of Columbus, Ohio. This company has been very successful in designing and building coal and ash-handling machinery.

Demorest Little Giant Concrete Mixer

Contractors and others interested in making concrete will find data for their consideration in a pamphlet issued by the Ballou Manufacturing Co. of Belding, Mich. This publication tells of the efficiency and economy factors comprised in the design of the Demorest Little Giant concrete mixer made by the company. The machine is built for either hand or power operation, and is portable. Both machines consist of two hoppers, one for cement and the other for sand and crushed stone or gravel, a water tank with feature for accurately regulating the water flow to almost a drop, and the mixing drum.

Power and Economical Transmission

"Power and Its Economical Transmission" is the title of a pamphlet which contains a reproduction of a lecture delivered before the Manufacturers' Association of Toronto last January by Henry Souther, mechanical engineer, of Hartford, Conn. This lecture is one containing much of interest to manufacturers and engineers desirous of being informed regarding the latest developments in the generation and transmission of power in the most efficient and economical manner. It is thorough and gives due attention to power, the steam engine, other sources of power, distribution, systems changing, electric transmission, transmission losses in general, belts and ropes, shafting and hangers, bearings and lubricants, friction tests, etc.

The Belt Book for October.

The October number of the Belt Book contains well-chosen articles relating to the production of modern belting. It will interest users of belts to read the methods employed by well-known manufacturers in producing belts for power and other purposes. The captions of the articles include "The Swamp a Century Ago," "How to Make a Belt Endless," "The Making of a Belt—Part II," "The Tanning of the Hide," "More Big Belts—One That Runs Nearly a Mile a Minute and Transmits 1600 Horse-Power." The editorial page says: "One of the exhibits at the Jamestown Exposition has been a roll of Duxbak belting constantly under a stream of water for five months without any deterioration whatever. It is the case where there can be no further argument—the water-proof belting is a matter of fact." Messrs. Charles A. Schieren & Co., Schieren Building, New York, manufacture Duxbak belting and are the publishers of the Belt Book.

Sullivan's Pressed Steel Plank Holder

People who are interested in concrete construction will find data that should have their consideration in an illustrated booklet being distributed mainly in the interest of Sullivan's patent steel plank holder. The Sullivan invention relates to improvements in molds, and more particularly in fastening devices for securing together the sections

or planks of a mold for concrete, cement or other plastic material. The object is to provide a simple, inexpensive and efficient fastening device of this character by means of which planks or mold sections may be rigidly secured together. This object is said to be fully accomplished in the Sullivan holder. A full description of the device is presented in the booklet, together with illustrations showing various methods for use in constructing concrete work of all kinds. Mr. J. H. Sullivan of Grand Rapids, Mich., is the owner and patentee of the plank holder and the manufacturer. He is desirous of sending the descriptive booklet to all who are interested in new and improved ways and means of facilitating and perfecting concrete construction or other work in which plastic materials are used.

C. O. Bartlett & Snow Company.

Among engineers and manufacturers of elevating, conveying, mining and milling machinery of a most comprehensive character the C. O. Bartlett & Snow Company holds a leading position. The company's general catalogue No. 16, for 1907, well indicates the great variety of mechanical appliances in the class noted which are offered to buyers. It contains over 300 pages of descriptions and illustrations of the machinery designed and built at the Bartlett & Snow shops, including coal tipplers, elevator buckets, excavating machinery, mining equipments, mixing apparatus, phosphate machinery, garbage-disposal plants, power-transmission appliances, brick and clay working machinery, ore buckets, screens, tanks, equipments for making wood-fiber plaster, also for making calcined plaster, gypsum, plaster of paris, asphalt, stucco, etc. Special attention is given to labor-saving machinery of all kinds. Standard types of the Bartlett & Snow productions will meet many conditions, but where special equipments are needed the company is prepared to furnish them by adopting the standard types with whatever changes are necessary or by designing and building special equipments. The C. O. Bartlett & Snow Co. has its main offices and plant at Cleveland, Ohio.

Reported that L. J. Smith, railroad contractor, Dwight Building, Kansas City, Mo., will be in the market for 16 locomotives, several steam shovels and other equipment.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,

Baltimore, Md., November 6.

In the Baltimore stock market during the past week United Railways common sold from 8¾ to 9; do. trust certificates, 9; the income bonds from 43¼ to 42; the funding 5s from 68½ to 67¼; do. scrip, 70; United 4s, 79 to 79½; Seaboard Company common, 10; Seaboard 4s, 63¼ to 63; G. B.-S. incomes, 16½ to 14½; do. 1sts, 40½ to 40; Gas 6s, 101 to 101½; do. 5s, 107½.

Other securities were traded in as follows: Western Maryland Railroad stock, 5 to 4¾; Atlantic Coast Line 4s, 85; Charleston & Western Carolina 5s, 101 to 100; Baltimore City Passenger 5s, 102¼ to 99½; Georgia & Alabama Consolidated 5s, 98½; Georgia Southern & Florida 5s, 102; Seaboard & Roanoke 5s, 102; Western Maryland 4s, 64; Northern Central Railway stock, 78½ to 80; City & Suburban 5s, Baltimore, 106½; North Baltimore 5s, 107½; Atlantic Coast Line stock, 62; Baltimore & Ohio, 81½; Houston Oil, 4¼ to 3½; Carolina Central 4s, 82; Baltimore City 3½s, 1928, 91; do. 1930, 91; do. 1936, 91; do. 1940, 91; Baltimore City 4s, 1925, 99½ to 99; do. 1926, 99; Columbia & Greenville 6s, 107½; Lexington Railway 5s, 96; Anacostia & Potomac 5s, 96½ to 97; Georgia Pacific 1sts, 108½; Metropolitan (Washington) 5s, 106½; West Virginia Central 6s, 101; Virginia Midland 5th, 104; Baltimore City 5s, 1916, 106.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended November 6, 1907.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	61½	65
Atlantic Coast Line of Conn.....	100	25	25½
Seaboard Company Common.....	100	9	9
United Railways & Elec. Co.....	50	8¼	9
Western Maryland.....	100	4½	5

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	33½	34
Farmers & Mer. Nat. Bank.....	100	100	100
German Bank.....	100	100	100
Maryland National Bank.....	20	17	17
Merchants' National Bank.....	100	171	171
National Bank of Baltimore.....	100	110	110
National Marine Bank.....	30	38	38
National Mechanics' Bank.....	10	26	26

Trust, Fidelity and Casualty Stocks.

Maryland Casualty.....	25	59½	59½
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Miscellaneous Stocks.

Ala. Con. Coal & Iron Pfd.....	100	8	8
G. B.-S. Brewing Co.....	100	2½	4

Railroad Bonds.

Albany & Northern 5s, 1946.....	95	95	95
Atlanta & Charlotte Ext. 4½s.....	95	95	95
Atlantic Coast Line 1st 4s, 1852.....	84½	85	85
Atlantic Coast Line 4s, Cfs., 1852.....	73	80	80
Atlantic Coast Line (Conn.) 5s.....	104	104	104
Carolina Central 4s, 1949.....	82½	82½	82½
Charleston & West. Car. 5s, 1946.....	99½	100	100
Char. Col. & Aug. 2d 7s, 1910.....	102½	102½	102½
Columbia & Greenville 1st 6s, 1916.....	106	107	107
Georgia & Alabama 5s, 1945.....	98½	99	99
Georgia, Car. & North. 1st 5s, 1929.....	99	99	99
Georgia Pacific 1st 6s, 1922.....	100	100	100
Georgia Sout. & Fla. 1st 5s, 1945.....	102	103	103
Petersburg, Class A 5s, 1926.....	100	107	107
Petersburg, Class B 5s, 1926.....	117	117	117
Piedmont & Cum. 1st 5s, 1911.....	95	95	95
Potomac Valley 1st 5s, 1941.....	108½	108½	108½
Raleigh & Augusta 1st 6s, 1926.....	112½	112½	112½
Raleigh & Gaston 5s.....	106	106	106
Savannah, Fla. & West. 5s, 1934.....	100	105	105
Seaboard Air Line 4s, 1850.....	62	63	63
Seaboard Air Line 5s, 10-year, 1911.....	94½	94½	94½
South Bound 5s, 1941.....	98	98	98
Southern Railway Con. 5s, 1934.....	101	101	101
Virginia Midland 2d 6s, 1911.....	102½	102½	102½
Virginia Midland 5th 5s, 1926.....	105	105	105
Washington Terminal 3½s.....	80	85	85
Western Maryland 4s, 1952.....	63	64½	64½
Western North Car. Con. 6s, 1914.....	106	106	106
West Va. Cen. 1st 6s, 1911.....	101	102½	102½
Wilmington, Col. & Aug. 6s, 1910.....	102½	102½	102½

Street Railway Bonds.

Anacostia & Potomac 5s, 1949.....	96½	97	97
Baltimore City Passenger 5s, 1911.....	99	99½	99½
Baltimore Traction 1st 5s, 1929.....	106½	106½	106½
Charleston Con. Elec. 5s, 1999.....	90	90	90
City & Suburban 5s (Balto.), 1922.....	106½	106½	106½
City & Suburban 5s (Wash.), 1948.....	96½	97½	97½
Knoxville Traction 1st 5s, 1928.....	98	100	100
Lake Roland Elevated 5s, 1942.....	107½	107½	107½
Lexington Ry. 1st 5s, 1949.....	95½	97	97
Mech. Ry. & Lt. 1st Con. 6s, 1855.....	93	93	93
Maryland Electric Railways 5s.....	80	80	80
Metropolitan 5s (Wash.), 1925.....	106½	106½	106½
Newport News & Old Pt. 5s, 1938.....	90	90	90
Norfolk Railway & Light 5s, 1944.....	90	90	90
Norfolk Street Ry. 5s, 1944.....	102	102	102
North Baltimore 5s, 1942.....	107½	110	110
United Railways 1st 4s, 1949.....	79½	79½	79½
United Railways Inc. 4s, 1949.....	42	42	42

Miscellaneous Bonds.

Consolidated Gas 6s, 1910.....	101¼	101¼	101¼
Consolidated Gas 5s, 1939.....	107	108	108
G. B.-S. Brewing 1st 4s.....	38½	40	40
G. B.-S. Brewing 2d Inc.....	14½	14½	14½
Mt. Vernon-Woodly's Cot. Duck 5s.....	74	74	74
United Elec. Lt. & Power 4½s.....	85	85	85

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending November 4.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	90	90
Aiken Mfg. Co. (S. C.).....	90	90
American Spinning Co. (S. C.).....	130	145
Anderson Cotton Mills (S. C.).....	74	75
Arkwright Mills (S. C.).....	110	110
Augusta Factory (Ga.).....	80	80
Avondale Mills (Ala.).....	125	125
Belton Mills (S. C.).....	129	129
Bibb Mfg. Co. (Ga.).....	113½	113½
Brandon Mills (S. C.).....	125	125
Cabarrus Cotton Mills (N. C.).....	127	127
Chadwick Mfg. Co. (N. C.) Pfd.....	99	99
Chiquola Mfg. Co. (S. C.).....	121	130
Clifton Mfg. Co. (S. C.).....	115	116
Clifton Mfg. Co. (S. C.) Pfd.....	101	101
Clinton Cotton Mills (S. C.).....	150	150
Columbus Mfg. Co. (Ga.).....	96	101
Courtenay Mfg. Co. (S. C.).....	97½	97½
Dalhousie Mfg. Co. (Ala.).....	104	104
Darlington Mfg. Co. (S. C.).....	80	92
Eagle & Phenix Mills (Ga.).....	137	137½
Easley Cotton Mills (S. C.).....	145	150
Enoree Mfg. Co. (S. C.).....	70	80
Enoree Mfg. Co. (S. C.) Pfd.....	100	100
Enterprise Mfg. Co. (Ga.).....	90	94
Exposition Cotton Mills (Ga.).....	225	240
Gaffney Mfg. Co. (S. C.).....	59	61½
Gainesville Cotton Mills (Ga.).....	91	92
Granby Cot. Mills (S. C.) 1st Pfd.....	47½	52
Granville Mills (S. C.).....	169	165
Greenwood Cotton Mills (S. C.).....	97	98½
Grendel Mills (S. C.).....	120	122½
Henrietta Mills (N. C.).....	161	175
King Mfg. Co. John P. (Ga.).....	97	100
Lancaster Cotton Mills (S. C.).....	110	112
Langley Mfg. Co. (S. C.) Pfd.....	91	96
Laurens Cotton Mills (S. C.).....	150	160
Limestone Mills (S. C.).....	140	140
Lockhart Mills (S. C.).....	93	95
Lockhart Mills (S. C.) Pfd.....	97	100
Louise Mills (N. C.).....	90	95
Marlboro Cotton Mills (S. C.).....	89	91
Mayo Mills (S. C.).....	165	185
Mills Mfg. Co. (S. C.).....	110	110
Mills Mfg. Co. (S. C.) Pfd.....	105	105
Monarch Mills (S. C.).....	115	120
Monarch Mills (S. C.).....	107	112
Newberry Cotton Mills (S. C.).....	140	150
Norris Cotton Mills (S. C.).....	120	123
Olympia Cot. Mills (S. C.) 1st Pfd.....	68	70
Orangeburg Mfg. Co. (S. C.) Pfd.....	90	97
Orr Cotton Mills (S. C.).....	108	111
Paeolet Mfg. Co. (S. C.).....	175	175
Paeolet Mfg. Co. (S. C.) Pfd.....	101	103½

[For Additional Financial News, See Pages 88 and 89.]

